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Towards...

**DECOLONIAL
EARTHEN
ARCHITECTURE**

by Carolina Isasi

ABSTRACT

In the global context, almost one third of the world population lives in earthen buildings. Half of those buildings are located in the global south. This fact makes earthen architecture an interesting contemporary practice worth exploring; one that has nonetheless been marginalized in the dominant Western academic architectural discourses and practices. Earthen architecture proposes interesting models of practice that can be aligned with sustainability and could—if approached with a pluralistic attitude—provide insights for transforming architectural practice more broadly. To better understand what those attitudes could be, I look into Decolonial theories, a particular Latin American school of thought that critiques western epistemological dominance. Thus, this master's thesis explores the question: what does it mean to assume a decolonial attitude towards earthen architecture? I have limited my scope to Latin America, although some ideas can be applied in other places.

The research is motivated by my desire to define the kind of sustainable architect who works with natural materials that I want to be. While learning about earthen architecture it seemed to me that the most valuable knowledge on the topic was embodied, that is knowledge that is only possible to learn on site, through doing. Because of that—and in parallel with my master's studies—I searched for and created for myself several site-classrooms, i.e. spaces where to practice earthen architecture, in Finland and in Argentina. In this thesis, I utilize autoethnography to analyze my experiences in seven of these site-classrooms. I search for internalized oppressive beliefs and I also investigate the ways in which I try to foster (or not) a sense of learning through narrative and personal writing, conveying a deeper inquiry and understanding of my learning process.

The interplay between the initial theoretical search and the embodied learning experiences result in four initial learning paths that I use to illustrate certain emerging decolonial attitudes: (1) shifts in the role of the architect; (2) changes implied by *mingas*, participatory and co-design experiences within the framework of *autonomía*; (3) the question of local identity in sustainable architecture; and (4) the coexistence of different ways of knowing the world. Each path recollects oppressive beliefs unlearned in the site-classrooms, and proposes a relearning alternative. I offer these paths to continue nurturing the idea of assuming a decolonial attitude towards earthen architecture.

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thank you
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I N T R O D U C T I O N



1. Above: visit to an earthen house in El Bolsón, Argentina, 2016

the **JOURNEY**

Leaving behind all certainties, I challenged the idea of what being an architect meant. I began from the foundations to build my own meanings in order to experience new ways of being in tune with my perceptions of the contemporary habitational needs.

My interest in earthen architecture (Correira, Neves, Guerrero, Pereira Gigogne, 2016), i.e. the practice of designing and building with natural materials and using earth as the main raw material, was born when the first echoes of sustainable architecture arrived in Argentina around 2012. My steps along the path to become a sustainable architect who works with natural materials have not followed a linear path. In the beginning, I experienced a contradiction that was difficult for me to overcome: while I was pretty convinced that earthen architecture was practically the only possible sustainable architecture, at the same time those natural buildings were quite distant from my daily experience of working as an architect in the city of Buenos Aires. That meant that most of the time I was thinking, ‘This is not for architects, is not for me’. Nonetheless, while trying to find other ways of approaching sustainable architecture, earthen architecture ideas resurface time and again.

Creative sustainability master program at Aalto University was an opportunity to explore further different approaches towards sustainable architecture. My first academic year allowed me the opportunity to dig deeper into my three main interests: **earthen architecture**, **decolonial thinking**, and **learning**, these becoming the core of the project I present here.

The evolution of the thesis topic is described in the following subheadings where I present different aspects of the process in order to arrive at the guiding research questions. I introduce the first doubts and questions about education and knowledge that emerged during different stages of my studies. This questioning process led me to critically read about decolonial theory in relation to personal experiences and observations of colonized thought and practices. The relation between decolonial theories and earthen architecture will be expanded later on in the thesis. For this introduction I expose the relevance of earthen architecture as the space I found to experience embodied and practical learning with others coexistence of different ways of knowing the world.

UNLEARNING

It was during a course at the Art department¹ where I read for the first time about cultural and educational oppression and how it is linked to social justice. When defining the features of oppression, Lee Anne Bell (2010) writes about internalization as an embodied experience. Such idea of embodying experience has left an indelible impression on me. The author clearly explained it in the following extract:

INTERNALIZED

Oppression not only resides in external social institutions and norms, but lodges in the human psyche as well. Oppressive beliefs are internalized by victims as well as perpetrators. The idea that poor people somehow deserve and are responsible for poverty, rather than the economic system that structures and requires it, is learned by poor and affluent alike. Homophobia, the deep fear and hatred of homosexuality, is internalized by both straight and gay people. Jews as well as Gentiles absorb antisemitic stereotypes. (Bell, 2010, p. 23)

¹ The course was named “Social and Cultural Issues in Art Education” by professor Kevin Tavin, 2014.

Reading her description of oppression helped me understand better why I felt so far away from earthen architecture. I suddenly became aware of how—consciously or unconsciously—my home university and other social circles to which I belonged promoted a certain type of architecture, nurturing the idea of the superiority of certain western practices. When reading about the theory of oppression, it became clearer to me that first I needed to work hard in order to unlearn the oppressive beliefs I had internalized in the social institutions of my home country. To start with the unlearning process, I needed to identify those beliefs first. I next share a few examples of the thoughts that needed to be unpacked and relearned.

At the beginning of my master's program in creative sustainability, I was very disappointed to learn how closely related the words sustainability and development are. I used to associate the notion of development with negative connotations, such as exploitation, domination and extractivism. I equated it with some kind of large-scale oppression. I perceived again a huge contradiction within the phrase 'Sustainable Development'; according to my understanding, the two concepts were mutually exclusive.

Further reflecting and coming to the present, I had to confront myself and ask: why did I come to Finland to study sustainable architecture? It seemed to me that in Argentina I had internalized an Eurocentric value system and despite beginning to question this, I repeatedly assigned to it through thoughts and actions. Following the logic of that value system, I believed that in Finland I would have access to knowledge about the future of sustainable architecture.

In Argentina, I had a three-years compulsory course in the history of architecture. However, one could ask, the history of what architecture? The content of the course was mainly the history of western architecture. Surely there is Latin-American or even Argentinian architecture worthy of study, which would be much more relevant for an Argentinian architect? Why wasn't I encouraged to study the history of my own built environment? How is it decided what kind of architecture I shall study?

I started to more systematically question this value system - which put the West and Western values on the top of hierarchy-, everywhere and in every possible manner: in the representation of maps, in arts, in architecture, in aesthetics, in knowledge, in business, in social interaction, in language, in politics, and even in the clothes I wore and the food I ate. I found out that most of my fundamental thoughts, those governing my life, were founded on Western philosophy and Western authors. I began to ask who would be the proper Latin American writers I should be reading instead? And eventually, this questioning process led me to read about decolonial thinking (Marañón-Pimentel, 2012).

DECOLONIAL THINKING

Decolonial thinking belongs to a Latin American school of thought that proposes an analysis and critique of eurocentrism based on the interlocking triad of Modernity/Coloniality/Decoloniality (Castro-Gómez, 2005). Some of its main proponents are the Argentinian Walter D. Mignolo, the Colombian Arturo Escobar and the Peruvian Anibal Quijano (See Gomez Castro 2005 for an introduction). Closely related to postcolonial studies, decolonial thinkers in Latin America question the discourse according to which modernity is an “autonomous European process” (Farrés Delgado & Matarán Ruiz, 2014, p.345) that started during the 17th century as part of the Enlightenment. They affirm that the ‘ontological fundaments of modernity’ can be traced to the philosophical debate that the Spanish conquest of America generated about the human nature of indigenous populations. For them, “coloniality and modernity are two faces of the same coin” (Mignolo, 1995; 2002 as cited in Farrés Delgado & Matarán Ruiz, 2014, p.345).

Decolonial theories postulate that towards the end of colonialism and colonial administrations, a world-system in which western epistemology dominates over other epistemologies was consolidated. The hegemony of western epistemology today relies on a long imperial history, which contributed to the build-up of a superior and universally valid western enunciating subject (Farrés Delgado & Matarán Ruiz, 2014). Decolonial thinkers are interested

in searching for alternatives to coloniality. For instance, ‘autonomia’ can be a genuine attempt to build a totally different form of government for a new type of society in harmony with other peoples and cultures. (Escobar, 2016 as cited in Testori & d'Auria, 2018).

When reading about decolonial thinking, I started to perceive that the answers to my questions were immersed in a rather complex world-system which was at the same time familiar and unknown to me. The same system enclosed explanations for the contradictions I perceived within the concept of sustainable development, architectural history and my choice of attending an MA program in Finland.

Thus, in this thesis I will try to articulate how the phenomenon of contemporary earthen architecture can also find a place within the complex system of ideas presented by decolonial theories and not as a consequence of the global coloniality articulated through the triangular structure of coloniality of power, coloniality of knowledge and coloniality of being exercised by the western epistemic privilege (Castro-Gómez, 2007 in Farrés Delgado & Matarán Ruiz, 2014). Instead, I consider that communal practices of contemporary earthen architecture, which respect the natural and cultural environment from where they emerge, hold the potential of becoming one of the ‘alternatives’ that so many decolonial authors aspire for. In accordance with this, the intention behind my fieldwork is to make earthen architecture visible and accessible as a communal practice that enables genuine opportunities to build a new type of society in harmony with other peoples and cultures.

EARTHEN ARCHITECTURE

In parallel with the theoretical search that led me to the decolonial turn, I started to delve into earthen architecture. Clay, wood, stone, and sand have been used for building by many different cultures all round the world for millennia (Minke, 2001). The ancient but ever-present technique of building with earth is nowadays gaining more attention as a sustainable alternative. (Correia et al., 2016). From now on I will refer to ‘earthen

architecture' as those practices of designing and building with natural materials which use earth as the main raw material.

It has been observed that in the global context 30% of the world population lives in earthen buildings. It might also be relevant to note that half of this percentage is located in the global south (Houben & Guillaud, 1994; Blondet, Villa García & Brzev, 2003; Fratini et al., 2011 as cited in Rotondaro, 2007). Earthen architecture is thus not only about the restoration and conservation of ancient buildings, it is also a relevant present-day practice. Despite these facts, it is not easy to find documented research literature about the topic. After my initial literature review attempt, I felt that the most valuable knowledge comes from construction sites. Learning the techniques through practice not only would give me direct understanding and a connection with the materials and tools involved, but it would also link me with people relevant for my work. Therefore, I decided that if I wanted to work with mud, I needed to get my hands dirty -literally. Different construction sites became classrooms for me and for this reason I refer to them as 'site-classrooms' in my thesis.

In parallel with my master's studies, I searched for and created for myself several site-classrooms by attending various courses and events related to earthen architecture in Finland and Argentina. I also visited many natural buildings and met all kinds of people with a huge range of different interests in relation to this working field. These visits and site-classrooms became the main location for relearning.

The site-classrooms are grouped in accordance with the different ways I approached them. The experiences of living behind academic classrooms and immersing myself in field work are presented first as those experiences I approached as an attendant in the search of embodied learning experiences. The second grouped experiences recount episodes of my internship work in Finland with The Natural Building Company² during my turning from fieldwork architect to an architect who do office work. Finally, my way back

² <http://naturalbuilding.fi/>

to fieldwork as a creative practitioner trying to apply what I had learnt before, begun with organizing a workshop on earthen architecture which I called ‘The Hornero Project’ for the Kolibri festival³, an art festival for children and their families in Helsinki.

THESIS STRUCTURE AND RESEARCH QUESTION

The thesis is structured in two main parts. In part 1 I present the background theory underlying the thesis in three chapters. In order to describe the context in which the thesis aims to make a research contribution, I expand on relevant concepts associated with earthen architecture and decolonial theories. At the end of this first part, I present the main argument of the thesis: there is a possibility and a need to form a dialogue between earthen architecture and decolonial theories. As a starting point, I uncover some of the ways in which decolonial theories can inform earthen architecture and vice versa. My focus is on the relevance of this to my own practice and to Latin American earthen architecture in particular.

Part 2 is about learning. I introduce some of the most significant experiences I encountered at the site-classrooms I created for myself on the topic of earthen architecture. Using elements borrowed from autoethnography, I identify particular assumptions (or oppressive beliefs) I faced in each of those site-class rooms, and I reflect on what I learned in them. The section concludes with a reflection on those first encounters in order to recapitulate the simultaneous process of unlearning and relearning that I have undergone.

This master’s thesis explores the question of: what does it mean to assume a decolonial attitude towards earthen architecture? By researching these topics and presenting the ideas in a dialogical way, I assume this attitude in my own practice, in the hope that it could be relevant to others as well. I have limited my scope to Latin America, although some ideas can be applied in other places.

³ <http://www.kolibrifestivaali.org/en/annantalo-whole-family/>

part 1

B A C K G R O U N D



2. Earthen house in Córdoba, Argentina. Kalapas.

earthen **ARCHITECTURE**

Earthen architecture is one of the most original and powerful expressions of our ability to create a built environment with readily available resources.

This chapter is about different aspects of earthen architecture in Latin America which are relevant to the thesis topic. They are organized in three sections under the titles of Heritage, Vernacular architecture and Contemporary earthen architecture. Section 1 Heritage presents some history related to earthen architecture in Latin America. In section 2 the notion of Vernacular architecture is expanded as a convergent point for themes related to the thesis topic, such as identity, temporality and self-build practices. Section 3 explores different aspects of the contemporary practices of earthen architecture in Latin America and ends with a summary of the main challenges identified in the literature.

Academic research on earthen architecture started in the 1970s in response to a double demand. On one hand, there was a need for specialized knowledge in order to preserve ancient buildings. On the other hand, since the construction industry was identified as one of the most polluting activities in terms of material flow and CO₂ emissions, this ancient technique was for many architects and users the best possible way of curbing pollution (Ferreiro, 2010; Correia et al, 2016).

Contemporary earthen architecture has been inspired in part by the dissemination of research findings started in the 1970s. Even though the aim of that research was originally to enrich techniques of restoration and conservation for world heritage buildings, it did not take long for architects concerned with environmental issues to

start exploring how to apply ancient techniques and new research knowledge to new buildings (Ferreiro, 2010). Research areas have been expanded, for instance, in the direction of the two main challenges of contemporary earthen architecture. Namely, these challenges concern the stigmatization of earthen buildings (linked to poverty and doubts about sanitation, structural resistance and durability) and the lack of normativity supporting the dissemination of the practice (Minke, 2001; Rotondaro, 2007; Ferreiro, 2010; San Vicente, 2014; Correia et al, 2016; Neves, Salcedo, & Faria, 2017).

Some authors who write on the topic emphasize the distinction between knowledge and know-how (Correia et al, 2016). The building technology has survived and evolved, thanks mainly to the process of sharing know-how within communities over generations –this has not necessarily involved university educated architects. However, in the contemporary scene, some professional architects have become key actors for the revindication of earthen architecture when they started to adapt research findings and solutions from ancient building into contemporary architecture (San Vicente, 2014). Contemporary research knowledge and technological transference are closely intertwined nowadays in those architects who adopt ancient techniques in new buildings.

1. HERITAGE

The conservation and restoration of heritage has been the starting point for the renewed interest in building with natural materials, together with the growing concern for the environment and sustainability. Settlements and buildings that communities have self-built taking advantage of the resources to hand are worthy of being preserved because they condense ancestral knowledge (Correia et al, 2016). Research on earthen architectural heritage may sound like studying far away archeological sites, however, it also refers to the study of buildings standing as witnesses of time in our intense urban lives.

In order to discuss heritage in Latin America, I present four study areas: Pre-Columbian Heritage, Colonial and Republican Heritage, World Heritage, and Vernacular Heritage (in accordance to the proposal in Correia et al., 2016).

Pre-Columbian heritage

Archeological studies specializing in earthen structures are relatively recent in Latin America. Due to the greatness of stone architecture and the late valorization of the techniques employed in building with earth as the main material, there have been significant losses of this heritage. Nevertheless, it is possible to say that earth has been used for building continuously for at least four thousand years in Perú, Guatemala, Bolivia and southern Mexico, from modest refuges and granaries all the way to complete metropolises (Guerrero, 2016).

Namely, the original pre-Columbian techniques found in Latin America are ‘adobe’ consisting on earthen blocks which are produced by hand-filling molds and dried outdoors; ‘bahareque’ or ‘quincha’, also known in English as ‘wattle and daub’, consisting of frameworks made out of wood, cane or reeds covered with mud; and ‘direct molding of plastic mud’ which is a technique similar to ‘cob’ consisting of piling and molding mud (Minke, 2001).

It has been pointed out by Guerrero (2016) that a remarkable aspect of the pre-Columbian earthen architectural heritage is that there are great similarities in the region between construction systems. Whether because of the usage of similar local resources or because of direct cultural exchange, there are significant similarities regarding building techniques, layouts, forms and dimensions of palaces, temples, platforms, plazas and housing units. However, he also mentions that there were particular characteristics in the use of each technique in the different regions which made them recognizable as local building cultures.

Colonial and republican heritage

By the 17th century, the social changes and new living conditions that came with the process of colonization instigated by the Spaniards and Portuguese affected not only the lifestyle, but also the pre-Columbian modes of production and building culture of the original inhabitants of the American continent. Over three hundred years of European domination, a syncretism took place in which Western traditions were adapted to local conditions, which were simultaneously transformed to generate clearly 'mestizo' conditions. In addition, it is important to recognize that in the colonial era the process that today is called globalization was initiated, with its correspondent flow of people, objects and knowledge (Guerrero, 2016).

During the colonization period, there were almost no changes in the quinchá technique, while the direct molding tradition almost disappeared (Minke, 2001). The adobe technique was improved with the introduction of design elements such as arches, vaults and domes. At the same time, 'rammed earth' or 'tapial' was introduced by the Spanish and Portuguese conquerors and it was mainly used for building fences which delimitate the extension of a terrain (Guerrero, 2016). The new technique consisted on filling a formwork with layers of earth and compacting each of them with a tamper (Minke, 2001).

During the independence processes in Latin America in the 19th century, there were no great changes in earthen architecture. Some minor changes were introduced, but only in the stylistic aspects of the facades. It was by the end of 19th century, with the arrival of numerous waves of European immigrants, that the usage of earth as a building material was replaced by industrialized -and mainly imported- materials (Guerrero, 2016).

World Heritage

The United Nations Organization for Education, Science and Culture (UNESCO) considered the cultural importance of earthen architecture throughout the world as the common heritage of humankind. As a result, it was in 2007 when the World Heritage Committee approved the initiation of the integrated World Heritage Programme on Earthen Architecture (WHEAP). The objectives of the 10-year long program (2007–2017) were to promote the protection and conservation of earthen architecture by the international community, to strengthen resources for training and to raise the awareness of the broader population. In 2011, it was acknowledged that 10% of the World Heritage properties incorporated earthen structures (UNESCO-World Heritage Convention, 2007).

To ensure an integrated management system, UNESCO has established different regional groups. In the region of Latin America and the Caribbean (LAC) -ratified by 33 countries- there are so far 140 properties inscribed on the World Heritage List. Properties classified in the LAC region have been selected as historical sites, cultural landscapes, archaeological sites and cultural itineraries. Despite the fact that the world heritage classified sites have been recognized mainly because they are considered 'exceptional', the use of earth as a building material is a common factor among the listed assets (Correira et al, 2016).

During the second cycle of the periodic evaluations in the LAC region to ensure the efficient protection of World Heritage sites, a lack of management capacity and expertise was identified as one of the most urgent needs in some countries of the region. In this context, a regional action plan with a Capacity Building Strategy (EFCAS 2015-2024) has been formulated to address the most urgent requirements. (UNESCO-World Heritage Convention, 2007)

Vernacular Heritage

When it comes to vernacular heritage, UNESCO established general considerations as examples of what could be recognized as vernacular heritage:

- (a) A way of building emerged from the community itself.
- (b) A recognizable local or regional character linked to the territory.
- (c) Consistency of style, form and appearance, as well as the usage of traditionally established architectural types.
- (d) Traditional wisdom in design and construction, which is transmitted informally.
- (e) A direct response to the functional, social and environmental requirements.
- (f) The application of traditional construction systems, trades and techniques (ICOMOS, 1999).

Besides, the Charter on the Built Vernacular Heritage (1999) puts relevance on the dimension of identity considering that vernacular heritage constitutes a “fundamental expression of the identity of a community, its relations with the territory and, at the same time, the expression of the cultural diversity of the world” (p.1). It continues by saying that vernacular heritage is “the main evidence of the natural and traditional ways in which the communities have produced their own habitat” (ICOMOS, 1999, p.1). In addition, the same document warns that the continuity of the building tradition is being threatened by the forces of cultural and architectural homogenization together with socio-economic globalization (ICOMOS, 1999).

2. VERNACULAR ARCHITECTURE

García, Tamayo and Malo (2017) made a review of different authors to describe the changes in the meaning of vernacular architecture over time. I will use that review in to structure the following ideas: (1) that there is a connection between vernacular heritage and native populations; (2) that vernacular architecture can be considered heritage as well as a contemporary practice; and that (3) the previously mentioned continuity can be exemplified by the study of self-build practices.

García et al. (2017) have traced the concept up to the beginning of the 20th century, when it appeared in the narrative of travelers, missionaries and colonizing officers of that time to describe typical buildings observed in Latin America. The authors recount that over the 20th century, vernacular architecture became a direct reference to ‘rural’ and ‘preindustrial’ architecture. Since it was considered to be ‘spontaneous’ and ‘anonymous’—with no architects involved—it was considered as “inferior, retrograde and stagnant” (Lopez, 2011, as cited in García et al., 2017, p.659). It was considered as “previous to the true architecture” (Guerrero Baca, 2010, as cited in García et al., 2017, p.659).

If vernacular architecture was a terminology applied in the narrative of travelers, missionaries or colonizing officers to describe the existing buildings in the territory, it implies that the ‘anonymous’ vernacular architecture was built by native populations, in other words, by people inhabiting the territory previous to the arrival of these travelers, missionaries and colonizing officers.

Different authors engaged with the topic of earthen vernacular heritage in Latin America (see in particular chapter 2 in Correia et al., 2016) explicitly draw a connection of those buildings with native populations. As it was said in vernacular heritage, the importance of those buildings resides in that they constitute a significant part of Latin American identity (ICOMOS, 1999). Through the study of the applied techniques, materials used, buildings’ layouts and design

strategies for adapting to climatic conditions, it has been possible to identify certain customs and ways of living of native populations which did not survive in the form of oral transmission to the arrival of Spaniards and Portuguese (Correia et al, 2016; Neves et al., 2017; Hernández Carazo, 2017).

Guerrero (2016) exposes that in some latitudes there are regulations for the preservation of vernacular heritage, whose criteria are based on historical values. However, he states that the situation is different in Latin America in the sense that vernacular architecture is considered to be 'timeless' and 'alive' because it is built and modified in the same way for decades or even centuries. In the same direction, UNESCO recognizes that there is a continuity of vernacular architecture in Latin America (ICOMOS, 1999).

From heritage to a contemporary practice, the continuity of vernacular architecture can be studied through one ancient custom rooted in native populations, which is still performed in present times, albeit with some adaptations. That custom is about the communal work traditionally inspired by intentions of mutual support and solidarity. Villaverde Maza (2017) identified at least fifty different expressions referring to communal work in relation to agricultural and building activities around the world. For instance, in Finnish it is called 'talkoot'. In Latin America, there are at least six words rooted in indigenous languages. Within cultures inhabiting the Andes the most popular one is the Quechua expression 'minga' or 'minka'. In English, the contemporary adaptation of the practice can be referred to as 'self-build' as the "range of activities leading to the design, construction, maintenance and management of the physical structure and immediate surroundings of permanent shelter for human beings" (Westendorff, 2009; p.2).

To recapitulate with the changes in the understanding of the meaning of vernacular architecture, García et al. (2017) state that on the verge of the 21st century, vernacular architecture was incorporated within the category of fine arts and the discourse of high architecture. No longer considered as previous, but as a

particular practice parallel to what was happening in other areas of architectural production. They expose the following description: “vernacular architecture lacks aesthetic or theoretical pretensions; it works with the place and with the microclimate respecting other people and their houses and consequently the total built and natural environment.” (Rapoport, 1969, p.12, as cited in García et al., 2017, p. 658). Adding a social dimension to the previous description, Guerrero (2016) manifests that vernacular architecture can be understood as the works of architecture that communities have built with their own hands, “taking advantage in a balanced way of the resources offered by nature” (p. 63). He claims that at present, a trend associated with permaculture and bioconstruction is placing value on ancestral construction systems adapting them to local conditions and that it is possible to foresee a promising future for vernacular earthen architecture.

A great impulse for the revalorization of vernacular architecture has been the major MoMA photographic exhibition, ‘Architecture without architects’ in 1964 organized by Bernard Rudofsky which showed buildings inserted in natural contexts from around the world (Lopez, 2011; San Vicente, 2014; Zorrilla, 2015). The huge work undertaken by Rudofsky to document what was previously considered anonymous architecture, emphasized its virtues in terms of capitalizing the resources available at hand (San Vicente, 2014). This work was in tune with another big name of the vernacular: the Egyptian architect Hassan Fathy.

Fathy designed his first mud brick buildings using traditional methods and materials at the end of the 1930s. He combined knowledge of the economic situation in Egypt’s rural areas with traditional architecture and urban design techniques, and he gave villagers the capacity to prepare materials with their own hands and raise buildings. Climatic conditions, public health considerations, and skills in traditional crafts all helped to forge his style (San Vicente, 2014). His great repertory includes housing, markets, cultural buildings, schools, palaces and mosques in Egypt and other countries in the Middle East, Mallorca and the United

States (Rotondaro, 2007). Besides, he participated in various projects of urban planning, being the case of New Gournia the most popular one which has been widely discussed (Rotondaro, 2007; UNESCO-World Heritage Convention, 2010; Archidatum. Architecture in Africa, 2016). Most of his work has been conceived with earth as the main material. In a way it is fair to consider Fathy's work a precedent of the best examples of the sensitivity and local uniqueness of Islamic architecture. In fact, the awards that the Aga Khan Foundation has been giving since the year 1978 can be understood as a continuation of the path initiated by the Egyptian (San Vicente, 2014).

3. CONTEMPORARY EARTHEN ARCHITECTURE

In light of what has been discussed in the previous section, it can be said that the practices of contemporary earthen architecture continue the legacy of the knowledge accumulated over the centuries. In this section, I intend to clarify the contemporary notion of vernacular architecture in Latin America through the study of different models of managing and producing contemporary earthen architecture, and through the study of the challenges that most of the reviewed authors say that contemporary earthen architecture is facing.

To contextualize the contemporary practice of earthen architecture, it is possible to say that earthen solutions have millions of different users and builders with all levels of acquisition, including those inhabiting arid or humid regions, in urban or rural areas (Minke, 2001; Rotondaro, 2007). Protagonists and users of this story include self-builders, technicians, professionals, scientists, leaders, enthusiasts, politicians, non-governmental organizations, communal organisms and a wide range of institutions and organizations.

There being such a wide variety, it is quite natural that earthen architecture follows different tendencies on a global scale. In Asia,

the Middle East, and Latin America, the interest is mainly social: the aim being to primarily solve urgent needs. In Western Europe, effort is put into aspects like recycling, energy efficiency, life cycle assessments, and the environmental damage caused by the building industry. In the United States and Australia, they concentrate more on technological improvements and entrepreneurship, while taking care as well of the history of techniques and heritage (Rotondaro, 2007).

Managing and producing models

Based specifically on classifications proposed by Rotondaro (2007) and Ferreiro (2010) regarding the models of managing and producing contemporary earthen architecture in Latin America, I will introduce three different approaches to contemporary practices. Firstly, I describe the 'self-build practices' and the characteristics of the current adaptation of the ancient practice mentioned in vernacular architecture. Secondly, I will set out the practices of 'social housing' as those ones consisting in bigger scale projects and with multiple actors involved. The last model refers to the work of independent architects and other experts. Each of these modalities can operate independently, however, most of the time they interact with each other.

The continuity of communal work in relation to building has gone through some changes. Currently, the self-build modality can be accompanied by the work of experts on earthen buildings. Experts offer a great variety of services depending on the background experience they have. Besides, they can be involved either from the initial phase of the design process up to the end of the construction phase, or only in a particular phase (Rotondaro, 2007; Ferreiro, 2010; Correia et al., 2016). This model is quite widespread in Latin America and it is used to build houses for single families in particular. In some occasions, the model is adopted to build 'social housing' as well. Families, communal centers,

municipalities, cooperatives and non-governmental organizations are usually the actors involved in this model (Rotondaro, 2007).

In parallel, there is also the self-build practice where no no experts are involved. Rotondaro (2007) states that buildings resulting from this production model are often “brutally conditioned by situations of poverty and inequality” and that they are usually referred to as “traditional manifestations” rather than as “contemporary architecture” (p. 345). In other words, contemporary self-build housing without experts involved is the one modality which is most similar to the ancient way of working communally. That might be partially the reason why it is associated with the past—by naming it as traditional rather than as contemporary. Moreover, by naming such buildings as manifestations rather than as architecture, they seem to be considered “previous to the true architecture” (Guerrero Baca, 2010, as cited in García et al., 2017, p.658) as was vernacular architecture in the beginning of the 20th century. Rotondaro (2007) emphasizes the value of the ancestral popular knowledge on display in these buildings, which are the result of direct oral transmission within a family and within the broader community.

The second approach to models of managing and producing is social housing. Actors involved in social housing projects in Latin America can vary within a combination of social -and sometimes international- organizations, self-builders, governmental organizations and researchers. Most of the time, the initiative comes from social organizations and they are supported by researcher who share their expertise and by the local government, for instance, to provide resources, or to create a legal framework for the projects to operate legally (Pereira Gigogne, 2016). However, Rotondaro (2007) consider that there is a recent phenomenon in Latin America, which is that different governmental organisms are now taking the initiative through researchers, social organizations and self-builders.

Social housing is a response to different demands, such as the reconstruction of dilapidated neighborhoods in zones which suffer from Chagas disease, earthquakes, or other natural disasters. This

modality of housing management has been operating for decades and there is a great vastness of experiences. It is gaining popularity particularly in Latin America where the demand for housing and the lack of economic resources are a common reality (Rotondaro, 2007; Ferreiro, 2010; Correira et al., 2016).

The last model of producing and managing earthen architecture is the work of independent architects and other building experts committed to raise awareness about the benefits of earthen architecture and to spread the word through their work. Most of this work consists of projects commissioned by private actors who hire an architect in a traditional way. However, two main aspects are remarked on in the reviewed literature (and which I consider are connected); on one hand is the formal explorations with regard to the architectonic language, on the other hand are changes in the work dynamics introduced by the implementation of participatory methods during the different phases of the project (Rotondaro, 2007; Ferreiro, 2010; Pereira Gigogne, 2016).

As a partial conclusion, it is possible to state that in the three modalities there seems to be a tendency towards a more horizontal, inclusive and respectful way of knowing, working and expressing different ways of being in the world.

In addition, the essence of communal work is manifested in the three modalities and, together with the materiality, there seems to be a connection between vernacular architecture and contemporary earthen architecture.

Challenges of earthen architecture

Among the reviewed literature discussing contemporary earthen architecture in Latin America, there are at least two recurrent themes which are presented as challenges. The first one is the stigma of earthen buildings which have been rejected as a viable building

solution for a long time despite the environmental, social and economic benefits they have to offer. The second one is the lack of normativity/legal instruments supporting the practice, and sometimes even preventing it (Minke, 2001; Rotondaro, 2007; Ferreiro, 2010; San Vicente, 2014; Correira et al, 2016; Neves, Salcedo, & Faria, 2017).

As an attempt to unpack the description of the stigma, I will use four subtopics where doubts undermine the beliefs on the benefits of earthen buildings: the propagation of Chagas disease, resistance to earthquakes, durability of earthen buildings and the connection with poverty.

The association between Chagas and earthen buildings is based on the observation of cases in which there certainly were coexisting factors. However, research from Ecuador, Guatemala, and Paraguay have shown that there are various other factors involved which are more crucial than the usage of earthen materials to offer the appropriate conditions for the propagation of the disease. Research shows that the insects that propagate Chagas disease choose to live in such places as the holes of walls which have not been compacted enough, and where there is a lack of natural sunlight and high levels of humidity (references to these studies can be found in Ferreiro, 2010; Correira et al, 2016; Neves et al, 2017).

In addition, it is relevant to mention that in its origins, the belief is associated with the replacement of earthen materials by industrially produced ones (Ferreiro, 2010) which started to take place by the end of 19th century along with the arrival of numerous waves of European immigrants (Guerrero, 2016) as mentioned previously in Colonial and republican heritage.

The second subtopic is related with the durability of earthen buildings. It is believed that they are not as resistant to rain and other weather conditions as buildings built with industrially produced materials. For instance, Ríos Cabrera (2016) mentions that there is a belief in Paraguay that earthen buildings will melt in the heavy rains that are frequent, and that they do not last as long as

buildings built with industrial materials (like different fired bricks). Similar beliefs are mentioned by Hernández Carazo (2017) when describing the situation in Costa Rica.

Different studies have been conducted in order to demystify these beliefs and the durability of earthen buildings has been evaluated (for studies in Paraguay see Correia et al., 2016, pp.223,259, 295). Results suggest that given certain specific building and design characteristics, earthen buildings last 100 years while reinforced concrete buildings with fired bricks walls last 70 years (for more on this study in Costa Rica see Hernández Carazo, 2017).

The third subtopic is related to the structural resistance of earthen buildings, particularly with regard to tectonic movements. In comparison with the exposition of Chagas disease, it can be said that there are some similarities in the sense that the association is grounded in the observation of cases where earthquakes have certainly destroyed earthen buildings. However, research has shown that there are other relevant factors involved which determine the overall performance of a building during an earthquake. For instance, in El Salvador and Peru, research methods were developed in order to observe the resistance of earthen buildings built using different techniques during tectonic movements. As a result, structural design solutions have been incorporated into traditional techniques in order to improve the performance of these buildings during tectonic movements (see more of these studies, particularly in chapter 8 of Correia et al., 2016).

In contrast with the previously mentioned successful experiences, in Costa Rica adobe and quinchá (named 'bahareque' in that region) have been explicitly prohibited by the country's seismic code (Bernadette Esquivel, 2017). Some efforts have already been made to meet the technical and legal guidelines established in the seismic and construction codes. However, these processes are slow due to the lack of professionals dedicated to developing the legal and regulatory processes further (Hernández Carazo, 2017).

Finally, the fourth subtopic is related with poverty. The association of earthen architecture and poverty is mentioned often in the literature. To mention one concrete example, the results of the last census in Costa Rica showed that adobe is considered less valuable as a building material than discarded materials used to build precarious habitat solutions (National Institute of Statistics and Censuses, 2011, as cited in Bernadette Esquivel, 2017). The main challenge of this particular stigma seems to be that it cannot be counteracted by quantitative research as can the previous ones.

However, regardless of the doubts about sanitation, durability, resistance and the connection with poverty, the introduction of earthen techniques in social housing projects, together with the work carried out by independent building experts, are helping to promote a new credibility for earthen architecture. In order to overcome the stigma of poverty, one strategy has been to incorporate adobe brick walls in houses built with industrial materials (Rotondaro, 2007).

Stigma and the lack of normativity are not separate domains. The little acceptance that earthen architecture has among the general public is reflected in the lack of legal instruments regulating the activity in Latin American countries. One specific consequence of the lack of normativity is that it becomes a barrier when it comes to access to financial support for developing projects of social housing or projects from independent architects (Correira et al, 2016).

On the other hand, the result of the studies regarding seismic risks carried out in El Salvador and Peru have been reflected into government legislation such as different regulations and decrees issued by the government, and the commitment to disseminate the information in order to reach as many self-builders as possible (Correira et al., 2016).

In terms of initiatives taken forward in order to fulfill the legal void, there is a relevant research project carried out by PROTERRA⁴, whose main objective is to create a legal frame for

⁴ Iberoamerican network for earthen architecture and construction, promoting technical and scientific cooperation. (Correira et al, 2016)

Iberoamerican countries. The project started by compiling technical norms, regulations, building codes and ordinances of earthen architecture from nineteen countries (Correira et al, 2016). The preliminary results show that majority of the countries have different technical or legal support and that the tendency is growing. Regarding building techniques, the one that is covered by the greatest amount of legislation is the contemporary BTC: compressed earthen blocks with cement additive (Rotondaro, Aranda, & Gonzáles, 2017). During the 1950s, the Interamerican Housing Center created the CINVA-RAM press to manually produce these compressed blocks. The technique has been widely spread in the region and it has been used in governmental initiatives in particular (Correira et al, 2016).

Researchers conducting the project for a legal framework in Iberoamerican countries believe that the process of normalization is going through a key moment. Besides, they state that earth is a noble material with adequate characteristics and that it will contribute to solving problems linked to climate change, natural disasters, social and economic inequalities, and the common housing deficit in many countries of Latin America (Rotondaro et al., 2017).



3. Strange earthy formation. El Hoyo, Argentina, 2016

turning **DECOLONIAL**

It is necessary to decolonize education in order to unlearn and relearn architecture. However, what does it actually mean to ‘decolonize education’?

To conclude part 1 of this thesis, I present in chapter 3 a dialogue between earthen architecture and decolonial theories, the latter being presented in this chapter. Section 1 of this chapter begins with a general review of decolonial theories accompanied by a further description of some key notions. In section 2, I present connections between decolonial theories and architectural or urban practices and theories already established by some colleagues.

1. GENERAL REVIEW

Castro-Gómez (2005) recounts how towards the end of the 20th century postcolonial theorists from the ex-European colonies in Asia and the Middle East (cf. Said, 1979; Spivak, 1988; Bhabha, 1994), proposed that colonialism is not just a political and economic phenomenon, but has an epistemic dimension too, which means that it has implications for the way people think about themselves and understand their world. Postcolonial theories postulate that through the humanities and the social sciences, an imaginary about the social world of the subaltern (the oriental, the black, the Indian, the peasant) was created. Knowledge and subjectivity were ‘super-structural elements’ crucial for the imperial domination of Europe over Asia and Middle East during the 19th and 20th centuries. (Castro-Gómez, 2005).

As was mentioned in the introduction, decolonial thinking belongs to a Latin American school of thought which is closely

related to postcolonial studies in the sense that they question the discourse according to which modernity is an autonomous European process started during 17th century. I will describe here the notions of coloniality of power and decolonial aesthetics, as they can add relevant perspectives to better understand my thesis topic.

Race and Eurocentrism in Coloniality of Power.

One important distinction to be made before entering into the definition of coloniality of power is that between colonialism and coloniality. While colonialism refers to a political and economic relationship in which the sovereignty of one nation rests in the power of another nation (which makes the latter an empire), coloniality refers to a set of patterns of power that were established to control fundamental areas of social existence such as work, gender, collective authority and intersubjectivity, beginning from the colonial experience initiated in America (Torres Maldonado, 2007; Quijano, 2000 in Marañón-Pimentel, 2012; Quijano 2001 in Farrés Delgado & Matarán Ruiz, 2014; Sipan, 2018).

Marañón-Pimentel (2012) describes coloniality of power as a theoretical perspective developed by the Peruvian sociologist Aníbal Quijano to understand the existing power structures in Latin America, with the aim of starting to move towards the decolonization of such structures. In addition, the author explains that Quijano places the idea of 'race' articulated within the first global, capitalist, modern and colonial pattern of power initiated with the conquest of América.

As regards coloniality, the issue of race surfaces in the following way: colonial domination and exploitation were justified according to the racial discourse due to the inferiority of the conquered people and the superiority of the conqueror (Grosfoguel, in Montes y Busso: 2007 as cited in Farrés Delgado & Matarán Ruiz, 2014, p.345).

Race as an issue has an unknown history before the colonization of the Americas and what I found relevant is that with

this theory it is possible to identify the specific circumstances when categories like Indians, blacks and mestizos were not only introduced into Latin American discourses of modernity, but these started to be perceived as 'inferior' races and as 'previous' to Europeans; while at the same time white Europeans started to be perceived as 'superior' (Quijano, 2000b as cited in Marañón-Pimentel, 2012).

Classifications like 'inferior' and 'previous' were already used in this thesis to define vernacular architecture and to describe the stigma of poverty in contemporary earthen architecture, particularly perceived within the practice of self-building without experts being involved. I am aware that it might sound pretentious to find explanations for a contemporary phenomenon in something that happened five hundred years ago, as the concept of race has changed over the centuries and I am not an expert in the topic. However, regardless of how old it is and the form it adopts, 'race' seems to be as challenging an issue now as it has ever been.

Nowadays, the idea of race articulated with modern coloniality can be perceived in many subtle ways that are difficult to pin down. Maldonado Torres (2007) says that coloniality remains alive "in books, in the criteria for academic performance, in cultural patterns, common sense, self-representations, aspirations of the self and so many other aspects of the modern experience that, as modern subjects, 'we breathe coloniality all the time and every day'." (Maldonado Torres, 2007 as cited in Farrés Delgado & Matarán Ruiz 2014, p.345).

The conquest of the Americas and the idea of race were for Quijano essential for the epistemic formation of modernity, and with coloniality of power the author highlights the Eurocentric and hegemonic perspective of such epistemic form adopted since the 16th century among the modern/colonial world system (Marañón-Pimentel, 2012; Farrés Delgado & Matarán Ruiz, 2014).

Regarding Eurocentrism and how it is relevant for this thesis, I must say that partial explanations for the questions presented in the

introduction of this thesis started to unveil. This was particularly true when I asked: *How is it decided what kind of architecture I shall study?*

Once again, it might seem forced to find explanations for a contemporary phenomenon, such as the criteria to define the content of disciplinary studies like architecture, in something that happened some hundreds years ago. However, it was around 2010 when I was encouraged to study for three years the history of Western architecture rather than the history of Latin American architecture in a popular public university in Argentina as part of my architectural diploma. In my understanding, the belief in the superiority of Europe (which I have also internalized) is still dominant in our present times.

Decolonial Aesthesis

Walter D. Mignolo (2010) offers a specification of coloniality of power and Eurocentrism suggesting that the philosophy of aesthetics has dominated the understanding of human sensations and sensory perceptions through the senses. The author points out the difference between aesthetics and the ancient Greek term aesthesis. While aesthesis is an original word from the ancient Greek used to express something around perception processes, i.e. the physical sensations of touch, sight, hearing and taste; the second one is a modern simplification. The history of aesthetics started to be written around the 16th century restricting the meaning of aesthesis to 'sensation of beauty' (Mignolo, 2010).

In a more recent philosophical study Rojas Parma (2015) researches the connections between aesthesis and episteme in ancient Greek text 'Teeteto'. The author exposes that Socrates asserts that aesthesis has different names such as vision, hearing, smell, cooling, warming, as well as pleasure, pain, passion, and fear.

Mignolo (2010) goes on to explain that aesthetics is a theory of sensations related to beauty, which was born in a particular European context -and that is completely acceptable for the author.

The problem he states is that the particular theorization of the European experience was universalized -for complex reasons that have to do with the construction of Europe started in 1492. In other words, and in light of what was exposed in coloniality of power, one could speak of local or situated knowledge that through Eurocentric discourses of modernity was universalized within the matrix of modern/colonial power. Hence, it makes sense to find contemporary earthen architecture in Latin America whose architectural language has clear Western influences. (The idea is expanded in chapter 3).

The conceptualization of decolonial aesthetics, mainly articulated by Walter D. Mignolo, is defined as follows:

Decolonial aesthetics asks why Western aesthetic categories like 'beauty' or 'representation' have come to dominate all discussion of art and its value, and how those categories organize the way we think of ourselves and others: as white or black, high or low, strong or weak, good or evil. And decolonial art (or literature, architecture, and so on) enacts these critiques, using techniques like juxtaposition, parody, or simple disobedience to the rules of art and polite society, to expose the contradictions of coloniality. Its goal, then, is not to produce feelings of beauty or sublimity, but ones of sadness, indignation, repentance, hope, and determination to change things in the future (socialtextjournal.org, 2013)

Decolonial aesthetics is not limited to the aesthetic experience of beauty and the sublime, but is defined as being closely related to the processes of perception, sensory experiences and sensory expressions. It seeks to open options for liberating the senses (Transnational Decolonial Institute, 2018).

As it will be exposed in the dialogue proposed between earthen architecture and decolonial theories, I consider that certain practices of contemporary earthen architecture in Latin America rarely seek to represent standards of 'beauty' defined by the philosophy of aesthetics or promoted by specialized media. Instead, they can be understood as examples of what decolonial aesthetics might be.

2. DECOLONIAL ARCHITECTURE

In this section I will present the work of two authors who intend to build bridges between decolonial theories and architecture and/or urbanism, in a similar way that I intend to do it with earthen architecture.

From the scant literature available, I have chosen to introduce the work of Contreras (2006) who reflects on the connection between the biophysical component in urban settings and the existing effort for developing a Latin American perspective of “urban political ecology” (Escobar, 2003 as cited in Contreras, 2006, p.95). Secondly, I will present the idea developed by Farrés Delgado (2013) of assuming a decolonial attitude in order to offer new perspectives to the historiography, theory and criticism of architecture and urbanism in Latin America.

With the analysis of the following selected literature I am expecting to describe the context in which this thesis aims to offer some contribution, that is in tracing the links between decolonial theory and contemporary earthen architecture.

Biophysical component and urban political ecology.

Contreras (2006) recounts decolonial theories which affirm that after the end of colonialism and colonial administrations, a world system has been consolidated and since then, Western epistemology has dominated over the rest of epistemologies. By assuming this critical position, the author raises the need to review contemporary urban and architectural theories—affirming that the discourse on urban and architectural theory is a product of Eurocentrism—from a decolonial perspective, specifically in Latin American universities, where there is currently a crisis of legitimacy of modern knowledge and its global impact. For this author, to carry out a decolonial analysis within urban and architectural theory in Latin America would mean to point the forms in which the modern

discourse is naturalized in order to identify its ideological and political characteristics.

Contreras (2006) analyzes the western understanding of nature: as ‘separated from humans’, as ‘passive’ and as a ‘means to an end’. He states that this understanding can be seen in Latin-American urban and architectural studies as well as in the general social sciences, where emphasis has been on the social, political and economic dimensions, ignoring the biophysical component of cities. The author considers this misconception of nature as being a limitation, since the biophysical component is not just a passive scenario, but it actively influences the social processes that occur within it. Therefore, he states that a decolonial perspective in research could raise a renewed interest in the city as a socio-ecological system, emphasizing the complex relationships between bio-physical and socio-cultural issues and urban concerns.

In turn, Escobar (2003) reinforces the idea that Modernity is structured on the separation between nature and culture, and identifies that Modernity establishes a regime of capitalist nature that sub-alter all other articulations of biology and history, of nature and society; particularly those that represent a culturally established continuity between the natural, human, and supernatural worlds. Finally, he considers these local models of nature as a possible basis for environmental struggles in Latin America today in relation to the global order (Escobar, 2003 as cited in Contreras, 2006).

In this sense, Contreras (2006) finds relevant the appreciation given by Escobar (2003) to important efforts being done for developing a Latin-American urban political ecology. These efforts aim to build an ethic and a culture of sustainability which would include rethinking production towards a new environmental rationality and a dialogue between other forms of knowledge towards the construction of new environmental rationalities. Within the purposes of the emerging Latin American environmental thinking—built on indigenous knowledge and struggles, peasants, and other subaltern groups aiming to imagine other ways of being

together with humans and non-humans—is to articulate a better understanding on the reconstruction of local and regional worlds in sustainable ways (Escobar, 2003 as cited in Contreras, 2006).

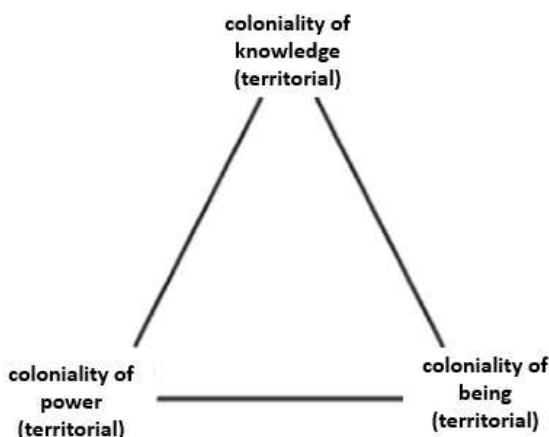
This article is relevant for my work as it lifts the importance of the commonly accepted definition of nature as a ‘means to an end’, which is an essential part of decolonial theories. Nature understood as ‘natural resources’ was one of the foundational concepts for capitalism, which is considered by decolonial thinkers to be boosted by the process of globalization initiated with the conquest of the Americas and the subsequent flow of people, objects and knowledge (Castro-Gómez, 2005).

In the present time, current mainstream practices of urbanism and architecture are great consumers of such natural resources. However, these practices and the dominant interpretation of nature are being challenged from multiple directions. Finding ways to weave assemblages of human–non-humans from design, and other creative practices, are considered a necessity in order to value plural ways of being (Botero, Del Gaudio, & Gutiérrez Borrero, 2018).

Within the examples of other ways of being together with humans and non-humans, it is possible to place vernacular architecture with its corresponding essential characteristics: respectful material usage and communal work.

Decolonial attitude

Farrés Delgado (2013) develops the idea of the ‘decolonial attitude’ building on the concept of ‘territorial coloniality’ as a proposal to (1) acknowledge the processes of homogenization and loss of identity; (2) to revisit obsolete urban theories; (3) and to embrace initiatives that promotes alternative ecological human settlements (Farrés Delgado & Matarán Ruiz, 2012).



1. Source: Farrés and Matarán 2012 (direct translation)

In his work, Farrés Delgado recounts how in Latin American countries, whether there was a pre-Columbian built heritage or not, reflections on identity usually end up revisiting colonial architecture which is basically Western: Hispanic, Portuguese, French, or English. He points out that there is little or no interest in thinking about possible spatial, aesthetic, technical or symbolic contributions coming from indigenous populations (Farrés Delgado, 2013).

Pointing at the tendency of homogenization and loss of identity in the territorial, urban, and architectural praxis, the author asks the following:

“Is it possible to say that in the context of a world system dominated by the modern and Western developmental worldview, can an urban diversity like the one of yesteryear exist?” (Farrés Delgado, 2013, p. 29)

Different possible attitudes assumed mainly by architects, but also by people from other disciplines, are identified. Farrés Delgado (2013) explains why it can be considered that from a 'modern attitude' it will be said that YES, there is urban diversity. On the contrary, from a 'postmodern attitude' and even from a 'deconstructivist attitude' the idea that there is NO diversity will be defended. The author also expands his analysis to intermediate attitudes such as the 'regionalist attitude' and territorialist attitude', and explains to what extent the latter ones present some limitations when it comes to fostering a deep territorial decolonization.

In the case of the 'regionalist attitude', Farrés Delgado (2013) considers that critical regionalism is more a revision of Western traditions in Latin America rather than a discussion about the Western epistemic hierarchy on which modernity is founded in Latin America. Furthermore, it does not aim to revalue the spatial, aesthetic and constructive conceptions of native cultures.

Regarding the limitations of the 'territorial attitude', territorialism, Farrés Delgado affirms that most of the authors writing about this theory assume that the 'deterritorialization of the metropolis' is a phenomenon intrinsic to capitalism. However, being himself from La Habana, in this doctoral dissertation he proves how the phenomenon has also reached communist Cuba (Farrés Delgado, 2013).

Given the limitations identified in the regionalist and territorial attitudes, Farrés Delgado (2013) suggests making a revision of the philosophical underpinnings and historical facts that perpetuate developmentalism. He suggests that a legitimate point of view which can provide an unprecedented perspective within the

historiography, theory and criticism of architecture and urbanism is the ‘decolonial attitude’ and the theory of the modern/colonial world system.

In order to establish a dialogue between the positive aspects of the different attitudes previously described, the proposal is to promote a ‘decolonial attitude’ that follows the perspective of modernity/coloniality and analyzes the tendencies of homogenization and loss of identity as part of the consequences of the privilege of the Western episteme. This decolonial debate on the hegemony of Western knowledge and the modern project, may seem foreign to urban theory; however, the global trends of homogenization and loss of identities suggest the opposite. (Farrés Delgado & Matarán Ruiz, 2014)

The three principal ideas I have retrieved from Farrés Delgado’s work are: First, the profound need to revisit urban theories which have been in part developed in the 20th century and are already obsolete. After identifying a hundred different terms about new metropolitan forms and new relationships between cities, the invention of concept after concept hardly leads to a credible understanding of what is happening in and between cities; besides, the predominance of adjectives such as global, international, world or transnational justifies rethinking the theoretical tradition in urbanism because it is inoperative for the new scale of the phenomena (Taylor and Lang, 2004 as cited in Farrés Delgado & Matarán Ruiz, 2014).

Secondly, what I found extremely valuable was the exposition that the author does in regards of the debate about the processes of homogenization and loss of identity—a debate which is still open. When I started to read in preparation for my thesis, I revisited Frampton’s critical regionalism as it was the most solid and contemporary theory I remembered reading about Latin American architecture. I sought to be guided by the hope of finding some links with contemporary earthen architecture in Latin America. However, as Farrés Delgado (2013) exposes, I also noticed that the kind of architecture showed as an example of critical regionalism was too

aligned with Western modern architecture. And it had little to do with contemporary earthen architecture.

Thirdly, in accordance with the third point of territorial coloniality which proposes to embrace initiatives that promoted alternative ecological human settlements, I would like to suggest that certain practices within contemporary earthen architecture in Latin America are guided by a 'decolonial attitude' even though they do not name it as such. This is again the case of vernacular architecture.

3. FINDING MY NICHE

The intention behind presenting the previous works was, in the first place, to show examples on how decolonial theories and architecture and urbanism can inform each other. A second aim is to frame the most specific connections I present in the following chapter (called the dialogue) between decolonial theories and earthen architecture.

The question of identity in Latin American architecture has a long history. It is often assumed that identity is something we have lost as a result of modern homogenization. Earthen architecture has gained popularity with the raise of environmental awareness and sustainability in recent years, carrying a sense of identity with the revalorization of vernacular architecture.

Earthen architectural practitioners in Latin America generally do not make use of decolonial concepts, and in most of the cases they are probably not even aware of them. Nevertheless, the memoirs of the past annual Iberoamerican Seminar on Earthen Architecture⁵ which publishes research and cases from practitioners of earthen architecture presents an interesting case. Among the 34 articles and 40 technical informs they have published, I found that

⁵ 17° SIACOT: Earthen Identities, La Paz, Bolivia.
<http://www.redproterra.org/subcategories/siacots-y-talleres>

when they refer to conflicts in architecture they use expressions such as ‘inadequate paradigms in education’, ‘acculturation’, ‘homogenization’, ‘globalization processes’, ‘imported models’, ‘international architecture’, ‘the arrival of development’ and ‘the access to new technologies’ (Neves, Salcedo, & Faria, 2017). My reading of their work identifies a critical perspective towards the modern project, or following Farrés Delgado’s (2013) terminology: some of them are already assuming a ‘decolonial attitude’. However, this is not always the case—as we can see later challenges are also defined from a modern / developmentalist perspective as well.

The only explicit link between earthen architecture and decolonial theories in the reviewed literature is the following claim: “It is necessary to decolonize education in order to unlearn” (Quiroz Quinteros, 2017, p.521). When describing her experience of ‘teaching through earth’ to future architects, Quiroz Quinteros (2017) affirms that it takes time and space, but it is necessary that students and teachers first divest themselves of traditional training structures, in order to learn other ways of observing reality. For the author it seems to be the only way to generate possibilities to learn differently, directly from practice and for life itself.

After presenting this reviewed literature, I would like to present the contribution that this thesis aims to offer in order to enable a more fluent interaction between decolonial theories and contemporary practices of earthen architecture.



4. Visit to an earthen house, El Bolsón, Argentina, 2016. Photo courtesy of Leandro Azorey.

the **DIALOGUE**

From the previously presented literature my aim in this chapter is to describe some of the possible fruitful conversations to be considered in order to assume a decolonial attitude towards contemporary earthen architecture.

1. WHITE PREJUDICES

Some authors engaged with earthen architecture consider that it is imperative for this building culture to be accepted by educational and governmental institutions and by the general public (Rotondaro, 2007; Correia et al, 2016). Even though the same authors consider that the stigmatization is being overcome, I find it relevant to draw the connections between the stigma of poverty in earthen architecture, and the issues of race and Eurocentrism in coloniality of power (Torres Maldonado, 2007; Quijano, 2000 in Marañón-Pimentel, 2012; Quijano 2001 in Farrés Delgado & Matarán Ruiz, 2014; Sipan, 2018).

Negative perceptions of poverty, rural areas, indigenous people and insalubrity linked to earthen architecture are commonly intended to be avoided, overcome, and sometimes to be even ignored. However, there are people influenced by those negative perceptions who have their own ways of observing the world which are as valuable as any other. Where does the negative connotation come from?

Quijano explains that the ethnic distinction has been the first geo-culture of the modern/colonial world system. Power

relationships established by Spanish conquerors with Latin American indigenous people were founded on the belief in an ethnic and epistemic superiority, i.e. superiority of certain people over others, and superiority of certain ways of knowing over others. To specify this problem, Quijano talks about 'coloniality of power' (Castro-Gómez, 2005).

After roughly five hundred years, the previously described way of relating with the unknown other is still recognizable within the Latin American imaginary. Certain people and certain ways of knowing the world are still considered not-as-good-as the imaginary of the wealthy, white, urban and Western culture.

Take the analysis of the following quote to illustrate how the belief in the superiority of Western practices still operates in Latin America:

Contemporary earthen architecture in Mexico has developed poorly compared to the dynamics of building with industrialized materials, one reason being the power accumulated by the cement and steel industries. Besides, there is a prejudice that underlies many sectors of the population about earthen buildings as a symbol of poverty and backwardness. However, during this century it is evident that there is a takeoff associated to some extent to the prestige that some clay works are beginning to have in the USA and Europe, which continue to be the main design references for contemporary architects. (Correia et al, 2016, p. 256)

After studying the issue of race and Eurocentrism in coloniality of power, it seemed to me that prejudice seems to be grounded on and justified by Eurocentric epistemology. What I find paradoxical from the analysis of this quote—which I took as an example of a perceived common belief—is that the new credibility that earthen architecture is now gaining in Latin America is indebted to the 'prestige' associated with the work of Western practitioners.

2. DECOLONIAL AESTHESIS

The segregation of people and knowledge is also visible in earthen architecture when it comes to choosing an architectural language. This phenomenon is notable in representational practices. The West dominates the mainstream with multiple visual and verbal expressions worldwide, molding, perhaps without a clear intention, the imaginary and preferences of millions of people. However, is it coherent to use the language of modern architecture when building earthen architecture in a place like Argentina, for example?

The modern project in its endeavor of eliminating ornamentation to reach pure abstraction in buildings, disdained vernacular vocabulary and traditions. In the words of Julian San Vicente (2014): “the despotic dream of colonizing the world with the ‘International style’ resulted in a tyrannical tabula rasa that, it could be said, anticipated today’s globalization. Of course, there are nuances to this statement.” (p. 13)

Some authors express their concern in relation to the observation that for earthen architecture to be accepted by wider social sectors it is needed to use the modern language; besides, in order to be accepted by official organisms, it should look similar to industrial housing produced by public content and executed by a building company. (Rotondaro, 2007).

In the beginning I asked: if I am not going to read Western philosophy, then what should I read? After studying decolonial literature and theory, and as an attempt to translate the critical perspective to earthen architectural practices, I consider that one way to begin overcoming ‘international’ and ‘modern’ language is to engage with the study and practice of the local building culture from the place where the new building will be realized. By becoming deeply involved within the study of the vernacular architecture of the place, the practices of communal work and the way the community of that place interacts with humans and non-humans, a genuine and harmonic language for dialogue with the surroundings may emerge.

In Latin America, the language of contemporary earthen architecture is being explored, questioned, created, and recreated continuously. In light of decolonial aesthesis, I introduce three observations from my review on the descriptions of contemporary practices of earthen architecture in Latin America (Pereira Gigogne, 2016; Roux Gutiérrez & Espuna Mujica, 2016; Pautasso & González, 2016). First, there is still a tendency to use Western categories proposed by the philosophy of aesthetics in order to classify Latin American architecture. Second, when describing the architectural language of earthen buildings, all the reviewed authors mentioned that participation was an important feature of this practice. Third, some of the authors referred to certain practices as ‘difficult to classify’.

There are certain contemporary earthen architectures in Latin America which are not traditional or vernacular and neither modern nor international, but have an aspect that is difficult to categorize and include participation in their realization. These can be considered as exemplary cases of ‘decolonial aesthesis’ (Mignolo, 2010). In the formal explorations carried on by contemporary earthen architects there is a search towards stimulating other feelings, sensations and emotions than just visual stimulation. For instance, participation in earthen architecture offers not only a stimulating haptic experience, but also interesting feelings, such as the sense of ownership and belonging or even emancipatory results, that may result in broader social changes.

3. PARTICIPATION, MINGA AND AUTONOMÍA⁶

As it was mentioned before, participation in architecture is especially popular in the realms of contemporary earthen architecture, e.g. self-building groups with or without technical assistance. Probably the long tradition of inviting family and friends to a ‘minga’ had an impact on the popularity of these practices (self-building groups without technical assistance). Furthermore, the renewed interest on the side of contemporary architects to include people in the design process is adding a professional aspect to the self-building tradition (self-building groups with technical assistance).

It is also important to mention that participation can also offer some limitations, one of them being the fact that sometimes people do not expect to be taken into consideration in the participatory design process generally proposed by the expert (Botero, 2013). By reflecting on this, I began to contemplate the need to close the gap between ‘experts’ and ‘users’ in design and other creative practices as a way to enable the conditions for spontaneous and equal engagement among all participants.

Manzini (2015) offers a great insight to this challenge. The author defines ‘diffuse design’ (referring to the fact that everyone has the capacity to design) and ‘expert design’ (referring to professional knowledge on design). What happens in between is the emergence of other design practices geared towards social innovation, such as co-design, participatory design, design activism. Among these other design practices, Escobar (2016) places what he calls ‘autonomous design’.

Autonomía as a cultural, ecological and political process has been interpreted from a design perspective by Botero, Del Gaudio, & Gutiérrez Borrero (2018), as a possibility for various actors—including designers—to support participation in the processes of

⁶ The English word ‘autonomy’ might have a more individualistic understanding than the term *autonomía* -by which I intend here to refer to the communal notion mobilized by Escobar and other contemporary thinkers (as suggested in Botero, Del Gaudio, & Gutiérrez Borrero, 2018)

change that communities are going through so that they can design themselves with dignity.

To illustrate the previous interpretation in the realm of contemporary earthen architecture, it is possible to talk about self-building practices which are often called mingas. In the words of Testori & d'Auria (2018), considering that the minga has a robust cultural background rooted in a long history and is supported by a combination of spirituality, solidarity and reciprocity bound to ceremonial behavior, the minga as a practice holds significant potential for enabling design processes that are genuinely rooted in *autonomía*.



5. Core building group, El Hoyo, Argentina, 2016.

part 2

LEARNING



6. *Clay waiting to be used, Helsinki, 2016.*

auto **ETHNOGRAPHY**

Writing has been the space I created to collect the embodied lessons from my site-classrooms as well as to reframe my story in a new living environment and culture.

In this chapter, I describe the reasons that led me to choose autoethnography as the guiding methodology for presenting the qualitative research done for this thesis. In short, the reasons were: the role of writing as an analytical method, the opportunity autoethnographic writing offers as an alternative way of informing and reflecting on wider issues in society through the writing of personal experiences, and the way it steps away from objectivity.

The overall methods developed and utilized among this thesis are further explained in the last section of this chapter.

1. Meaning and coherence through writing.

As I expressed in the introduction, it was through reading, reflecting on and writing about oppression that I became aware of the internalized value system which led me to consider certain Western practices as superior. I first blamed my home university and social circles because they had taught me a Western value system. However, I soon realized that the way I was telling that story clearly victimized me and left me in an uncomfortable, helpless place.

Kiesinger (2002) suggests that one motivation for writing can be the aim to contextualize life events within one's larger life story in order to make comprehensible and meaningful what would otherwise be perceived as unintelligible and painful. She continues by saying that the therapeutic value of narrative is to reframe our story in a way that empowers rather than victimizes us and that the process of reframing our story starts by externalizing our narrative. After the narrative is externalized, we can look at it analytically to observe the ways in which they shape our life, and to attend the story's overall foundation and structure (Kiesinger, 2002).

This is a process I can recognize within my writing experiences since I moved to Finland in 2013. Writing was not a choice, it was certainly a need I had to register and analyze the multiple changes I was going through since moving abroad and particularly since I started once again an intensive student life. My previous identification with broader cultural and social phenomena no longer existed in the new context. Reframing myself was a long process which started by writing.

May 16, 2014

I do not know who I am, who I was, who I want to be. It seems to me that everything is wrong, I do not understand how the society of which I am part works. I no longer know what is good or bad for me, for humanity, for the people I love. Everything I say or do is wrong, which paralyzes me.

These are my complaints. Shall I listen to them? It is hard. I feel that I cannot make decisions with my life because I do not know who I am anymore. Perhaps what is here to learn is to accept what there is...

July 12, 2014

Writing keeps me consistent. It forces me to find coherence in my actions, thoughts, and in my character. It is all about knitting. Writing is a constant knitting of coherence, with its eights and nines, its holes and color changes.

Narrative inquiry in terms of Ellis & Bochner (2000) creates the effect of reality: it consists of stories that show characters embedded in experiences of struggle when one's meanings and values are called into question. He describes that situation as characters trying to resist the intrusions of chaos, disconnection, fragmentation marginalization and incoherence, while at the same time trying to restore the continuity and coherence of life's unity.

My attempts to write about the way I was feeling are various, and none of them seem to be sufficient. I have chosen to present the first two as the representation of fragmentation -the first one- and as a representation of my attempts to use writing as a tool for knitting coherence. Probably the most finished description of how I perceived the shifts in my thinking is the following extract:

October 15, 2017

It is not possible to continue building meaning in the same way that I use to do before in my home country. If I try to do it, my words and acts sound incoherent and indecipherable in the new context I find myself in.

This is how I began to understand that the 'great piece of meaning' easily remains stable, comfortable and secure, while its foundational stones are well anchored to the surroundings which helped to create it.

When I moved abroad, the 'great piece of meaning' moved with me.

On the way, all the concepts that used to rest on that piece began to wobble and many of them fell off. My beliefs and their vulnerability remain suddenly exposed.

Are those beliefs really mine? Shall I rather call them acquired beliefs?

I have now the invaluable opportunity to consciously choose which beliefs will continue with me on the path of life that I choose to walk on.

The outcomes of utilizing autoethnography as a guiding methodology assumed different forms along the process of writing this thesis. The way in which writing became an analytical method was initially from writing diaries with no precise guidelines or intentions. The only condition was to write freely, being honest about my feelings and thoughts. Externalizing my narratives certainly had a therapeutic value for me and I started to recognize the ways in which those stories shaped my life.

The second approach I had to my diaries was to read them analytically. What emerged from this reading were the deeply seated prejudices and norms I was carrying with me and how they were connected in different ways to cultural phenomena. For instance, writing was always inspired by my personal experiences of cultural life; besides, those prejudices and norms were part of certain identifications I adopted in order to belong to particular stereotyped groups of people or schools of thought.

2. Initial stages with autoethnographic writing.

Besides the personal and therapeutic value that autoethnographic texts might represent for researchers, they can also be valuable for others. In this sense, Ellis & Bochner (2000) express that the descriptions of one's involvement in social processes can inform, awaken and disturb readers, making them conscious of their own involvement in processes about which they might not have been consciously aware. This becomes an invitation for the reader to reflect critically about their own experience. In addition, the value of personal narratives resides in that they can also inform about cultural phenomena and as stated by Suominen (2003) "Autoethnography is about writing one's self into culture, but it is also about writing one's personal experience in relationship to larger issues in society" (p. 39).

In order to place myself into what turned out to be my new Finnish context, I chose to write my experiences. Site-classrooms were the space I created to experience new ways of learning, and writing was the space I found to reflect deeper on my interactions with the Finnish environment, people and culture. It was guided by the writing exercise where I could relate my personal experiences with bigger issues. In what I thought was my personal struggle of feeling unable to make sense of my new living circumstances, I found some resonance with the global issue of coloniality of power, coloniality of knowledge and coloniality of being, as I try to show throughout this thesis.

September 21, 2014

The first year of the master's program has been hard, but somehow, I have become a little bit wiser because I needed to open my eyes to certain truths that were invisible to me before. As the origin and meaning of "sustainability" and the way globalization operates from this new Nordic perspective: benefiting some and harming many others.

Now I am confronted with the contradiction, that according to my own norms, i.e. the ones I acquired in my culture of origin, some of those norms I perceive in my new environment are wrong. However, I need to adopt these new norms in order to be able to be part of this society. This is an internal struggle that I face, especially now that I have to start writing the thesis.

As my main interests are arts, architecture, the environment, and education, how could I combine all of these into a thesis topic?

The issue of education confronts me with certain conflicts that I have with academia: is education some form of persuasion? Is it a new kind of colonization? How could we prevent it from being so? In addition, given the insistence of

*the legitimization of scientific knowledge as absolute truth,
how can we legitimize other truths / realities?*

I DO NOT WANT TO COLONIZE ANYTHING OR ANYONE.

“...Eurocentric way of building knowledge...”

The previous extract of my journal has been very easy to find and I have returned to it many times. It was during this writing when I started the Google search which led me to copy around ten pages of the first book I read on decolonial theories: “Economic Solidarity and the potential for transformation in Latin America. A decolonial perspective” (Marañón-Pimentel, 2012).

My way of doing narrative inquiry is quite clear in this entry. I first reflected upon the conflict I faced when assuming sustainability as something closely related with development. Second, I mentioned the contradiction I perceived between certain social norms in Argentina and Finland and my preoccupation of having to overcome this contradiction in order to belong to Finnish society. Thirdly, I connect with my concerns of finding a thesis topic in which I could intertwine my interest in education, the environment, arts and architecture, and I shed light on some kind of resistance I was experiencing within my learning process in relation with knowledge and educational institutions. What follows—the phrase with capital letters—I said aloud in a conversation with my friend. After that, my Google search started and the first phrase I decided to copy-paste was the expression that appears in quotation marks.

In this first example, it is possible to see how writing as an analytical method started to unfold as a working method. Besides, it is possible to see how personal narratives and broader cultural and social issues are intertwined. The next example of how I use this working method is about my reflections on learning and other related topics.

Besides the resistance I was experiencing in my learning process, due to the questions I was raising regarding education in general and knowledge production in particular, I felt that the theory on sustainability was overshadowing my professional expectations of becoming an architect who works with natural materials. In my search for knowledge, I had disregarded the importance of the sensory and social experiences of architecture. Site-classrooms were the way I found to immerse myself into embodied experiences and to find some balance between theories and practice.

Questions about knowledge have been a constant in my journals since 2014 -the following is a collection of examples:

How is knowledge produced? Which kind of knowledge can be considered more adequate in different settings? How can I make sense of my previous learning in this new environment? Is teaching some sort of way of 'colonizing minds'?

When I first began to seriously consider using autoethnography in my research, I read Finley's (2005) chapter 'Arts-based inquiry. Performing Revolutionary Pedagogy' and the line I transcribed into my journal was from the description of arts-based inquiry:

March 9, 2018

"Knowledge is made, not simply discovered"

(Eisner, 1991–1998 as cited in Finley, 2005, p. 690)

This line really made me happy. It spoke to all those journal entries I dedicated to persistently ask about the nature of knowledge. It reaffirmed the idea that there are different ways of knowing the world, and the Eurocentric was just one way. This reaffirmation inspired my aim in the following chapters is to include other ways of knowing I captured along the experiences of my site-classrooms.

3. Defining working methods.

In the first part of this thesis, the main method for unlearning bias and for evoking questions, was the critical reading and writing of decolonial theory and western architecture in relation to personal experiences and observations of colonized thoughts and practices.

In this second part, and particularly in this chapter, autoethnographic writing was the method for analyzing broader cultural phenomena through my own experiences. I developed a working method which consisted of first writing freely and honestly and secondly reading and writing analytically about the first writing. The analysis and reflections connect the personal experience with larger issues in society.

In the following chapters, embodied and practical learning with others -the experiences in the site-classrooms- and reflecting on and analyzing those practical experiences are the method for unlearning and relearning the meaning of architecture in light of theory.

November 3, 2017

Unlearning is a process of trying to give up everything you thought 'you know' in order to understand new ways of learning. Unlearning is a process that involves deep reflections on your assumptions and the way they operate within your thoughts. Unlearning is like planting a seed and starting to water it. After a period of steadiness, you learn to build your patience and at the end a small green shoot will come out of the ground. That is the moment when you start to grow your knowledge like a plant. You are rooted in the ground of whatever you used to know. The new knowledge you will create will be nurtured by the old one you have buried.

I used to have mixed emotions regarding sustainable architecture. While living in Argentina, I studied at university about more technical issues (like the U-value, orientation, thermal mass, characteristics of materials, calculations, solar panels). After my studies, I started to read about LEED norms,

green facades, green roofs, and little by little earthen architecture and permaculture started to gain more and more relevance in my daily reading routine. At that point I didn't notice any huge differences between these approaches towards the same topic.

When I came to Finland I noticed that there was a great emphasis on the normative approach and on software that can make accurate calculations as well as new materials and new technologies that ensure a better performance as regards energy efficiency. I tried to understand what all this 'new-knowledge' was about, but it was too difficult for me to comprehend; at the end I realized I could hardly make sense of that new-knowledge and I called myself to sleep for a while.

I went to sleep in a tent for one week in Vartiosaari with a group of people with whom we built a sightseeing platform using fallen trees we found on the island and some re-used wood. The frame was Pixelache festival which topic that same year was about the commons. The following month I went camping for two nights in a community called Soldbaka where I went to learn about clay plaster while plastering a straw bale cottage.

At that point I was between two extremes and trying to make sense of being in the middle. My condition of living between two countries contributed to the feeling of being stuck in the middle.

I buried it altogether: whatever I had learnt in Argentina and whatever I had learnt in Finland. I got pregnant and dedicated myself to nurturing the seed. The plant emerged and some months later I found myself with my 3 months old baby in a sustainable building fair in Loviisa.

The feeling I have is that my daughter connected me to earth—something I clearly hadn't realized that I wanted so much. That is how I started my data collection on building with natural materials as an action to help dismantling the power structures behind technoscientific approaches towards sustainable architecture.

To present the experiences from the site-classrooms I borrow elements from autoethnography, which has inspired me throughout the process of writing this thesis. During the time of my research, I collected the site-classrooms' experiences in my journal in order to further investigate my learning processes. My data is thus constituted by present descriptions of the experiences I had and extracts from my journals that communicate, inform and interact with each other in order to convey a deeper inquiry and understanding of my learning process. Both types of writing produced different kinds of knowledge. The descriptions communicate embodied experiences which have now been processed, understood and reflected upon, while the extracts of the journals reflect an in-the-moment way of knowing.

By combining an autoethnography inspired account of my own practice and learning journey with a literature review of the theories and concepts that informed my inquiry, I dissect patterns and processes which occur intuitively within me in order to make them communicable and relevant to others.



7. Soil recognition workshop, El Hoyo, Argentina, 2016. Photo courtesy Leandro Azorey.

learning to **UNLEARN**

When everything I had learnt about being an architect seemed to be senseless, the only one possible way to continue with my professional career was to unlearn the meaning of architecture in order to make some space for relearning.

In parallel with my master's studies, I searched for and created for myself several site-classrooms by attending various courses and events related to earthen architecture in Finland and Argentina. I also visited many natural buildings and met all kinds of people with a huge range of different interests in relation to this working field. These visits and site-classrooms became the main location for relearning.

The most significant experiences are organized and presented under three subheadings which constitute the three sections of this chapter. In the first one, from classroom to field work, I will recollect three fieldwork experiences in which I participated as an attendant in the search of embodied learning. The following section is about my second step in this learning path which was from fieldwork to office work. I recount here about my internship work in Finland with The Natural Building Company⁷. Finally, the third section is about coming back to fieldwork, this time not as an attendant, but as an organizer with the aim of applying what I had learnt. I present the experience of organizing a workshop on earthen architecture which I called 'The Hornero Project' for the Kolibri festival⁸, an art festival for children and their families in Helsinki.

⁷ <http://naturalbuilding.fi/>

⁸ <http://www.kolibrifestivaali.org/en/annantalo-whole-family/>

The style of my writing in this chapter is mainly descriptive and the experiences are presented in chronological order as they happen, except for one of them which switched places with the following one in order to make the story more comprehensible under the section titles (the experiences that shifted the chronological order are El Hoyo and Loviisa).

Each experience presents similar information about the context, about other people involved in the experience, about the origin of the material resources, about the particular moments when I recognize some assumption or belief to be unlearned, and some reflections and analysis are included as starting points to the expanded analysis developed in the following chapter: Relearning.

1. FROM CLASSROOMS TO FIELDWORK

The most significant experiences from classroom to field work, consist of the following three site-classrooms in which I participated as an attendant in the search of embodied learning.

The fall of the star architect in Vartiosaari

During the summer of 2014, after my first academic year, I attended my first ever experience of building with natural materials. It was in the context of Pixelache annual festival called ‘Commoners Unite!’ the call was to participate in a building workshop in Vartiosaari, a recreational island in Helsinki.

The workshop material outcome was a sightseeing platform made with fallen trees. The main material used were fallen trees found on the island. Besides, we reused some wooden decking found in an open container near the island.

The core building group consisted of the workshop organizer from Pixelache, the hosting artist who rented a studio on the island, two architects who came from Hungary as representatives of Hello Wood, and five other participants like me. At the end of the week,

around one hundred people arrived to the place for the two unconference days as the closing event of the festival.

On the first night, we who made up the core group met each other. In that first meeting, the architects openly presented with small sketches the two possible ideas they had been considering. I was surprised that there were no AutoCAD drawing skills on display. Only two sketches and a lot of talking and sign language was enough. We discussed with the group about the potentialities of each option until we decided on which one to build.



8. Sightseeing platform in Vartiosaari, Ville Hyvönen.

After one week, when the platform was already built, people attending the festival started to arrive. They were too many, and most of us from the core-building group felt somehow ‘invaded’. Not only had we built a platform of fallen trees and forged quality relationships with each other, what was present here was a strong sense of belonging and ownership towards the platform, the place, and the social group. In the end, we were all laughing at ourselves

and enjoying the company of a whole bunch of diverse people that had come together during the weekend.

Some reflections: During this experience, I recognized many assumptions that I was carrying around with me. The idea of the architect working in a well-established hierarchical way, the architect making decisions alone based on his/her knowledge, and the monopoly of AutoCAD over architectural representations, were challenged in Vartiosaari and started to fall apart when the transversality proposed to the group by the two young architects was even uncomfortable for me.

This experience challenged the idea of the single -usually Western and usually male- star architect working alone in an office. From the dominant collective image present at university and in the architectural offices I had worked before, I involuntarily incorporated the oppressive belief of the star architect. It was oppressive in the sense that myself as a female and Argentinian architect could not find a dignified place within the star architect sky. So, I decided to go all the way down to earth.

Continuing with the previous idea, Farrés Delgado pointed out that the 'modern attitude' contributed with the delinking of pre-existing cultural realities and it fostered the postmodern attitude of author's architecture. Postmodern architects -especially male ones- became personal brands themselves constituting the "global star system" which is highly dependent on mainstream architectural media (Farrés Delgado, 2013, p. 76).

Besides, the unusual setting in this site-classroom made it easier to see very important aspects of social interaction and group dynamics in relation to working together as well as surviving. From organizing working tasks to organizing daily needs like getting food, showering and spending some spare time together, all decisions were made on the go, quite spontaneously and with a lot of respect. Group dynamics were a very pleasant experience. There were some participants coming and going, but we had a core-group of eight persons who shared the whole experience from beginning to end. What I did not know at that time was that this turned out to be my first experience of participation in architecture.

While I was writing this thesis, I was lucky enough to meet four other friends from the core group at the island and experience that connection with the human and non-human again.

Fieldwork in Soldbacka

Right after Vartiosaari I went to a clay plastering workshop in Soldbacka—an intentional community situated in Inkoo, Finland. It was a weekend dedicated to learning how to prepare clay plasters and how to apply them onto straw-bale walls.

It is difficult not to meet The Natural Building Company in Finland if you are interested in this topic. This was the first encounter I had with the company: the organizer of the workshop, Charlie, was a partner in the company and lives in the ecovillage; he built the small straw bale house that we plastered.

There were at least four other participants like me. In addition, there were some volunteers, some people from the intentional community as well as the owner of the house. We all had some connection with natural buildings, but from different approaches. For instance, one of the participants made wooden windows, others were builders and some just enthusiasts wanting to learn useful skills.

When the presentation round started, I repeated the same phrase I had learnt to repeat during my master's studies at Aalto University: "I am Carolina from Argentina, I am an architect and I am studying Creative Sustainability". After listening to everyone, I realized no other person mentioned a university degree. Was it relevant at all? Maybe it is not in a situation like this.

Looking back at it now, it was this experience that showed how the institution came with me. Despite my attempts to take distance from academic environments, I still identified myself with various institutions. Maybe one of the few certainties I had by that time was belonging to a university. What I did acknowledge by that time was the privilege it can represent in different settings.

Before starting to prepare the mix of clay, water, sand, and straw, I remember being curious and asking the organizer where the materials came from. He explained that the clay was collected from

the site, but the sand and straw were brought to the site from somewhere else.

It was my first time working with clay, and it was cold and my hands needed to get used to massaging the plaster carefully in order to soften the straws in it. After some minutes, the cold was unnoticeable and little by little I had developed a technique for working the plaster onto the straw walls.

During this experience, I started to realize that I had a lot to learn. Even though I made notes and took pictures and videos, it was difficult to take in all the information. It was clear that in order to learn how to become an architect who works with natural materials I needed to attend many other workshops like this one.

Learning in context in El Hoyo

This experience took place in El Hoyo, a small town in Argentinian Patagonia. It was a three-week workshop during March 2016. It included lectures by different experts on earthen architecture and permaculture; visits to different natural buildings around the area; visiting the local 'adobero' (the person who makes the adobe bricks) and the quarry from where the clay had been extracted; as well as a lot of conversations, fun, and hard physical work at the construction site.

The organizers were a family: Marco, Nuria and their three-year old daughter Sofia. Marco Aresta was the architect in charge of the whole workshop. Besides, each week there were also experts in different topics leading the workshop, namely Jorge Belanko (craft builder, expert in building naturally), Natacha Hugón (expert on heritage of earthen architecture, on clay plastering and natural paintings), and Ramón Aguirre (architect specialized in Mexican vaults and domes).

The group of people changed quite a lot, but again we had a core team consisting of six people who attended the whole course like me, the family who organized the workshop, the facilitators, and the biogenic cook. Some others joined for a specific one-week module and people from the village came to do some volunteer work.

During the first week with Jorge, we learnt many practical things about working on a construction site, such as safety and hygiene, the use of tools, the rhythms of group work, playing different roles; and also, more general lessons like learning to manage our own energy and the importance of punctuality. Building with adobe bricks does not differ much from building with fired bricks. The main important difference I noticed is that in the building site there is neither lime nor cement to be manipulated and unintentionally inhaled, making the whole natural and human working environment much healthier.

Natacha first offered a 'soil recognition workshop' in order to learn how to identify different kinds of soil and to show us the kind of tests we can do before and after stabilizing it. We walked around the site searching for different soils finding silt, clay, some other strange compositions and we also tested the soil Natacha had brought from Buenos Aires. We examined the different soils through our senses, and came up with possible ways of stabilizing them. After that, we tried out those stabilization proposals by mixing the soil in different proportions with sand, water, and straw. And at the end we did some other tests. This is how we learnt what the specific characteristics that each component can offer to the mixture are.

With Ramón we learnt how to build a vault. It is easier when the adobes are smaller—so that we can handle them easily with one hand—the consistency of the mixture for gluing the adobe needs to be rather liquid, and the vault needs to be done at once, which means that all preparations have to be done in advance. I noticed how body performance and quality movements were essential for building the vault.

During our lunch-time conversations with Jorge we talked a lot about topics related to natural buildings, like dry toilets, renewable energy, and he put a lot of emphasis on self-building. Most of us were insistently asking which kind of soil is the most appropriate for building. And he will persistently answer that any soil can be stabilized for use in building. This answer seemed insufficient for us, but it was in fact just the introduction to the next module.

As Jorge had mentioned, Natacha repeated "there is no formula". The only certainty is that soil has infinite variations in its composition. It is important to know the characteristics that each of the components offers to the soil we are going to work with in order to stabilize it correctly. To stabilize a soil means to add specific components in order to achieve certain characteristics in the mixture, e.g. adherence, water resistance, flexibility, and plasticity. It is necessary to make certain tests on the soil before starting work.

During these three weeks, the most significant assumption to unlearn came via the statement 'there are no formulas'. This lesson came to challenge some profound aspects of my learning experiences within academic environments. I was certainly experiencing other ways of knowing.

The embodied learning experience during the soil recognition workshop was revealing to me as it was a concrete approach, an understanding of the world through the senses. Instead of having to read about the characteristics of the materials and descriptions given by materials providers, I was able to recognize and test the materials found in nature by myself. I used this approach later when I was in Finland preparing "The Hornero project".

Besides this, previous ideas on the role of the architect and group dynamics were revisited. There were complaints on some occasions within the core group about the architect being too distant. As the days went by, I was able to empathize with Marco when I became aware of all the management work he was doing at the same time as he attended to materials providers, other people working for him, the food, his family, and himself.

Last but not least, I started to perceive that we were a group of privileged people who had the chance to escape from our daily routines for three weeks in order to attend a very expensive workshop in quite a remote land. In general, I would say that we were all guided by the dream of building our own houses. And personally, I started to notice how difficult it could be.

2. FROM FIELDWORK TO OFFICE WORK

The following section is about my second step in this learning path which was about my work as an intern in Finland.

Loviisa local identity

‘Loviisa Vanhat Talot’ is an annual event in Finland during which people who are enthusiastic about the conservation of old log houses proudly open to the public the doors of those houses they take care of. At the same time, a fair is organized downtown with nearly fifty stands offering their products and services related with conservation, restoration, and natural materials.

In August 2015, before going to El Hoyo, I visited this fair in order to have my second meeting with The Natural Building Company, because they had a stand in the fair and a house they had refurbished had opened doors.

As hosts, the people I visited in their houses were very kind and open in terms of sharing information about their experiences and the experts they had worked with. Besides, in the fair I met three other partners from The Natural Building Company with whom I had a great talk and we started a conversation on the possibility to do an internship with them in the following months.

This experience was different from others, particularly in the sense that I perceived the event as a business-oriented show more than an event oriented towards environmental or social concerns in relation to natural buildings. And here I met a strong belief: building naturally shouldn’t be profit-oriented.

Internship with ‘The Natural Building Company’

During June and July 2016, after I returned from El Hoyo, I was working with this company partially in their office in Karjaa, and partially remotely from Helsinki.

As an intern, I was involved in many tasks, I designed a housing typology with the possibility to grow depending on the

client demands; I participated with them in the Raasepori Expo, a fair to sell products and services related to summer cottages; I went again to a site course facilitated by Charlie, but this time to learn how to build with straw bales in a traditional and ancient way; I participated in the architectural content of a housing project for Suomenlinna; and I developed the Hornero project.

I got to know their work much better and I learnt that The Natural Building Company builds with natural materials, but not necessarily with the ones available on the site or in the surroundings, and not necessarily applying traditional techniques. Some of the partners advocate for that way of working, and some others advocate for the implementation of 'prefabricated elements' which consist of straw compressed into a wooden structural module produced in Lithuania and shipped to the world. In addition, the second group of partners is in favor of a ready to use mix of clay plasters produced in Estonia and shipped to Finland.

In conversation with one of the partners, I expressed my concerns about the impact of the CO₂ emissions from the shipping. His response was to send the concern back to me referring to the emissions of flying back and forth to El Hoyo. He was right, I had learnt this already: there are no formulas to either measure or to apply sustainable architecture. There are many valuable attempts for doing so, but I personally haven't found any method as effective as my motto "keep it local". And this applies not only to the materials, but also to the lifestyles and traditions of the place where you are going to build. I am not saying it is easy, but it is this is my aim regarding sustainable architecture.

At that point, I met again that belief I recognized in Loviisa, which claimed that decisions about building with natural materials cannot depend on market logic, like going for the cheapest or making profit. Instead, in order to achieve sustainable architecture, being as local as possible is an important aspect to consider. The aim is to avoid the huge amount of CO₂ emitted into the atmosphere by the extraction, sometimes production, and transportation of materials. It is not solely about the materials we use, but the whole material industry that needs to be changed.

3. BACK TO FIELDWORK

Finally, this section is about coming back to fieldwork, this time as an organizer with the aim of applying what I had learnt. I present the experience of organizing a workshop on earthen architecture which I called ‘The Hornero Project’.

Embodied learning mini-minga

The Hornero project was a rallying point for inspiration coming from different sides. On the one hand, the Hornero (en: oven bird) is a native bird from Latin America, so called because of its habit of building an oven-shaped nest with clay and straw. I know that a bird’s nest is not exactly architecture, but taking inspiration from this model and trying to replicate it on a bigger scale was the kind of architectural exercise suitable for children. Inspiration also came in part from my necessity of trying to apply what I had learnt in the previous experiences, especially as regards to embodied learning or learning by doing and in regards to participation. Moreover, I thought it was a great opportunity to make a small contribution to the dissemination of earthen techniques.

The preparations for the Hornero Project started with what I called a ‘mini-minga’. During May 2016, I organized this event in my home in Helsinki in order to test materials and shapes while building a small prototype, and in order to observe people’s reaction towards the proposed activity. Participants were my family, three adult friends, and Matu, my friend’s five-year old.

One day on my way to the supermarket, I noticed a new construction site with a huge hole in it. After the soil recognition exercise, I learnt in El Hoyo, just by looking at it I was pretty convinced the soil composition had a great amount of clay. Little by little I started to carry clay to my house on every trip to the supermarket with the baby pram. The tests proved that the soil composition had a great amount of clay. Next, I bought some sand and straw and did the first trials to know how to better stabilize the soil.

By that time, I remember wondering: where am I going to get all the soil needed for the workshop? The ideal situation would be to make a hole in Annantalo (the planned location for the workshop) and use the soil from there. However, I knew this was challenging in many senses, like testing and balancing the soil mixture in advance and the question of how NOT to leave an open hole. Indeed, the question was raised.

Overall, the experience was a great chance to observe people's reactions and capabilities when they approach this kind of work for the first time. In the beginning, they were a bit shy and skeptical about what was going to happen. I talked a little bit about what we were going to do and after I put the first portion of clay in the structure they followed my action and little by little they appropriated the model. I also observed some concerns about getting dirty.



9. *Mati, Helsinki, 2016. Photo courtesy of Laura Gazzotti.*

The Hornero Project

The workshop was called ‘Let’s play with clay!’ and it took place one day in June 2016 in Annantalo, a cultural center in Helsinki, which was one of the venues for the spring edition of the Kolibrí festival that year.

The promotion for the workshop consisted of the following text and image:



10. Promotion picture for The Hornero Project, Helsinki, 2016.

Let’s play with clay! Earth has been used for building by diverse cultures all over the world for centuries. This time, a native bird from South America—the Hornero—will show us how to build a clay nest. Can we replicate the model? The workshop offers a hands-on opportunity for children and adults to experience the joy of learning by doing. The aim is to get in contact with the ever-present ancient technique of building with earth that nowadays is becoming popular again as a sustainable building alternative.

One day before the festival, Paul from The Natural Building Company picked me up with a van filled with the straw bales and bags of ready to use mix of clay plaster produced in Estonia that they were donating. We loaded the van with the willow rods I had previously collected, and we took all the materials to Annantalo.

After Paul left, I walked around the place until I decided where to build the structure.

Since I didn't have the chance to familiarize myself with the material beforehand, it was very difficult during the workshop to know how to balance the mix. Paul was familiar with the material and he was in charge of preparing the right amounts of the ready to use mix, water, and straw. However, I noticed that the material was quite different (less plastic, with too much sand) than the one I used for the pikku-talkoot. These characteristics of the mix made it difficult to shape it and work it in order to stick it to the willow structure.

Even though this workshop was planned to be facilitated by an expert for children, it was for me an interesting experience to reflect on participation. I remember wondering at that time: How is it possible to enable participation? Is it possible at all to inspire people reach feelings of ownership and belonging?

I was expecting that, for instance, volunteers from Kolibrí or the parents who came to play with their children would be more joyfully committed to the project proposal. I hoped that they would be more proactive adding new perspectives to the project, as Paul and Katia did, for instance. However, I faced a different reality in which most decisions and responsibilities were down to me.

As I mentioned before, there was a huge difference between the atmosphere created during the pikku-talkoot and the actual project. During the first experience, I was working with my friends in a small-scale project. During the second experience, I met most of the people for the first time in the making and the contact lasted between ten and thirty minutes. This was nowhere enough time to develop a 'working group feeling'. Moreover, the amount of people who joined the experience was twenty times more than the previous one. My perception was that the majority of them were coming and going from different directions. Only a few children enjoyed the activity of massaging and shaping the mix and stayed a longer time with us.

From Kolibrí they counted that around eighty children experienced working with mud during that four hours. It was very significant for me to build this setting in Helsinki city center and to

reach so many people at once. Building with earth definitely gained visibility during that spring of 2016 in the Kolibrí festival.

Many parents, tutors and grandparents wanted to talk with Paul and with me about their environmental concerns and their interest in earthen architecture. Furthermore, it was very gratifying to receive personally their positive feedback. As I had imagined before, they mentioned that their kids rarely had the chance to play with mud. I was also very relieved that no one complained about getting dirty!

Even though there were no complaints about getting dirty, the general attitude was one of taking care of one's clothes and remaining clean, which I understand perfectly: there were many other indoor activities and probably no one wanted to go around the festival dripping mud all over the place. However, my point is that in many cases this attitude prevented participants from attaining a deeper joy and engagement with the medium.

December 1, 2017

The Hornero project served me as a catalyst. It was the way I found to overcome the resistance I was experiencing in my learning process at university. With this project I was building trust in my own way of unlearning and relearning outside academic realms.

March 15, 2018

Reflecting upon my learning process I noticed that my way of knowing the world is to look back and make sense of what I have done before. Then I look forward and I try to visualize where do I want to go next. Lastly, I look around and I try to act coherently informed by lessons from the past and dreams of the future and resources of the here and now.

Through autoethnography my aim was to process the meaning I intended when I began to plan the Hornero project and finally define the meaning I constructed during the process.}



11. Pachamama mural in El Hoyo, Argentina, 2016. Photo courtesy of Ninette Conten.

in order to **R E L E A R N**

Over the course of the experiences in my site-classrooms which happened in parallel with reading decolonial theories, I was simultaneously unlearning and relearning guided by the question: what does it mean to assume a decolonial attitude towards earthen architecture?

This chapter is about the interplay between the initial theoretical search of this thesis and the embodied (un)learning experiences from the site-classrooms, which result in four learning paths that can illustrate certain emerging decolonial attitudes.

The first one refers to the necessary shifts in the role of the architect. The second one is about changes implied in the exercise of architecture by applying participatory practices and communal work within the framework of *autonomía*. The third one is about the implications of local identity through reflecting on the usage of local materials and practices in earthen architecture. And the fourth one refers to the coexistence of different ways of knowing the world.

Each learning path recollects oppressive beliefs unlearned in the site-classrooms, and proposes a relearning alternative to continue nurturing the idea of assuming a decolonial attitude towards earthen architecture.

1. ARCHITECT AS CULTIVATOR

As an alternative to the paradigm of the star architect, Linda Groat developed the concept of the 'architect as cultivator' (Groat, 2013). Groat denoted that there is a traditional understanding of the architect as a technician or the architect as an artist, and both conceptions contribute to the idea of the star architect. She argues that a third possible alternative is for architects to focus on the common good reinforcing the connectedness of people through cultivating environmental values. The architect as cultivator should concentrate on encouraging the collaborative and interdisciplinary spirit of the design process. This 'sensitivity for the cultural is the soul of design' (Groat, 2013).

The social implications of architecture are multiple. Since my experience in Vartiosaari, I began to realize that great results depend on the quality of the interactions between people representing a wide variety of disciplines and expertise. Besides, I learnt how beneficial it is to develop a shared sense of ownership and belonging within clients, users, developers, organizers, and specific consultants, i.e. all the people involved in the whole constellation of architecture.

2. PARTICIPATORY MINGA

One important difference between the star architect and the architect as a cultivator is the decision-making process. The previous lesson leads to the following one. In Vartiosaari, I experienced participation organized by others. When after the office work I returned to the fieldwork (with the prototyping mini-minga and The Hornero project), this time as an organizer, it was one of my aims to explore the process of enabling participation. However, I faced many challenges which made me wonder if participation was possible at all.

From my experiences as an attendant, I would say that participation has a contagious effect within a group of people when organizers have the ability to be open enough in order to inspire those feelings of ownership and belonging. However, it is also

important to mention that being open and hopeful about participants' engagement with the project is not enough. Moreover, there is a question of responsibility, which is particularly relevant when it comes to building a house where people will live.

I am aware that there is a lot of literature about participatory and collaborative design which might help me find answers in these directions. For instance, while reading for writing this thesis, I found an insightful review on participating design by Botero (2013). One of the limitations of this practice that the author mentions is that sometimes people do not expect to be taken into consideration, and this is exactly what I experienced during my attempts of applying into the fieldwork what I had previously learnt.

Overall, the advantages of participation in architectural projects—like mingas—carry significant social benefits and, in the particular case of earthen architecture, environmental values help to strengthen the synergies within the community involved and with the built and natural environment. As one of the essential characteristics of vernacular architecture, together with natural materials, communal work can help to foster the identity of a place.

July 16, 2014

The experience in Vartiosaari brought me closer to some vague concepts that were floating in the air. I experienced the connection between sustainable practices in art and architecture through learning. Social interactions were fundamental: human quality, the appropriation of work by the group, cultural codes, individual and group motivation, respect, fun, playfulness, food, singing, the spontaneous organization of the group, its cultural diversity, among so many other things...

3. IDENTITY OF EARTHEN ARCHITECTURE

The architect as a cultivator of environmental values and participation involving a wide range of people covered a great part of my concerns about the social aspects of sustainability. In relation with economic and environmental concerns, I found in my journal the question: who owns the natural resources? This question aims to encompass two sides of the same situation. On one hand, the existing global economic dynamic which consents that someone can exploit and make profit out of fossil fuels found in the Arctic to give a concrete example, and the paradox of claiming ownership of nature (through bureaucratic tools as private property).

In my descriptions of the site-classrooms, I tried to simplify this question in order to make it accessible through my experiences and I asked: where did the materials come from? The question has its roots also in my initial assumption that earthen architecture was possible to build using just the materials available in the same site. Later on, I started to assume that in most of the cases the materials come to the site from somewhere else. In that case, the ideal situation would be to keep it as local as possible using materials from nearby surroundings and trying to avoid transportation of any kind and any highly industrialized components.

Earthen buildings are being revalued not only as an environmentally beneficial option, but also for their healthy characteristics, particularly when comparing them with industrial materials like concrete, fired bricks, and steel. For the latter, a lot of non-renewable energy is demanded for extraction, production and transportation, emitting high levels of CO₂ (Rotondaro, 2007). The challenge is to invert the trend of a colonizing, alienating globalization, and -as San Vicente (2014) puts it- make room for a creative and participatory diversity that, inspired in the vernacular typologies can to generate fascinating new architectonic languages.

20/7/18

- *Have you thought what could happen if every building were an earthen building?*
- *Oh, that's my dream!*

This conversation must have happened around 2015. I was dreaming of a world where every building was built with the materials from the same terrain where the building was built.

My friend was trying to bring me back to reality and make me reflect on the possibility of earth being exploited, not in the respectful ways I was dreaming of, but just turning it into one more industrial material.

Not every building should be an earthen building. We need not colonize earthen architecture with universalisms. We need not to aim at making any practice mainstream. The challenge is to allow the variety of building cultures to coexist first in our value systems and then in our environments.

Latin American authors on earthen architecture mention the little support coming from the side of building regulations as being a challenge. I consider that this calls for further reflection. We do not need earthen architecture to become a norm. And if we do, how are we going to do it differently?

4. LEARNING IN CONTEXT

The fourth important lesson from the site-classrooms was that there are no formulas. In site-classroom El Hoyo we asked Natacha, Jorge and Ramón many times: which is the proper soil to work with? And what are the exact material proportions that we should follow in order to achieve a correctly stabilized soil? We wanted to learn some kind of abstract and universal formula that could be used in any kind of situation. Instead, we were told to approach the materials with sensitivity and respect. Touching, tasting, smelling and observing needed to be trained in order to recognize the characteristics of the materials involved with the ultimate goal of getting them to work together. Moreover, listening to local people

was encouraged by the suggestion of getting to know the history of the place where we are going to work in order to get in touch with local knowledge on building with natural materials

In an attempt to make a comparison between Western and Indigenous transfer of knowledge, Cajete (1994) identified a significant difference by saying that Indigenous educational traditions have a sense of story which allows for integrative lessons. Instead, he continues explaining that information has been separated from the stories and it has been presented as data, description and formula in Western education. Besides, the author identified disciplines and separate domains of expertise as domains of status and power, arguing that these domains have defined as 'knowledge' the narratives that circulate around and that they have succeeded to take apart, domains contribute with including some and excluding others. Cajete (1994) encourages the idea of allowing teachers to return to their roles as storytellers, and encourage students to become active listeners (Cajete, 1994, pp. 139-140 as cited in Martusewicz, Edmundson, & Lupinacci, 2015, p.303).

Through the previous description of the Western transfer of knowledge consisting of separating information from stories and presenting it as data, description, theory and formula, I identify this particular way of understanding in site-classroom El Hoyo when we were asking for universal formulas. We were probably on an unconscious level, reclaiming our power of creating knowledge in the Western way we had learnt at our Eurocentric Latin American educational institutions.

April 12, 2017

There are plenty of 'other' stories which I don't know, which are not told, which doesn't intend to be known. I like to fantasize that there are more people involved in creating those 'other' stories around the world, than people struggling with trying to impose one story over the rest.

concluding
THOUGHTS



12. *Visit to an earthen house in El Bolsón, Argentina, 2016. Photo courtesy of María Dorronzoro.*

In these concluding thoughts I discuss the findings from my relearning paths, particularly in relation to the dialogue proposed between decolonial theories and earthen architecture, in order to answer the research question presented in the introduction: what does it mean to assume a decolonial attitude towards earthen architecture? I also reflect on the methodologies I used throughout this research project, especially autoethnography as the guiding methodology. Finally, I explore what my research implies for my future, as well as the future of other researchers.

What emerged from the background theory and the dialogue between earthen architecture and decolonial theories were three topics. Looking through decolonial lenses, the first topic is connected with race, while through the earthen architecture lense it is called the stigma of poverty, and it is also linked to vernacular architecture and contemporary self-building practices. Both visions are connected with pre-Columbian indigenous populations, thus Latin Americans identity is implied. As it was exposed—in the presentation of colonial and republican heritage of earthen architecture—with the incorporation of industrially produced materials, earthen techniques began to be left aside, up to the point that currently vernacular architecture is considered to be threatened by the processes of homogenization and loss of identity. It is following this direction of thought that in relearning I propose a reflection about utilizing as much as possible materials available at hand, together with local techniques.

The second topic that emerged in the dialogue was about decolonial aesthesis, which I interpreted in contemporary earthen architecture as those self-building practices (sometimes called mingas) difficult to classify with Western categories of aesthetics. Besides, I pinpointed that when describing the aspect of contemporary earthen architecture in Latin America, authors highlight the participatory aspect included in this practice. This topic is explored in two of the relearning paths I proposed. On one hand, I reflected on the shifts that participatory methods implied in the role of the architect, being that a shift from the star architect to the architect as cultivator. On the other hand, I propose the learning path of participatory minga which, going back to the ideas presented in the dialogue, is a practice which holds potential for enabling design processes that are genuinely rooted in *autonomía*.

With the ideas presented in this dialogical way I identified four possible decolonial attitudes that emerged from my critical reading presented in part 1 of this thesis and from the analysis of the experiences in the site-classrooms as the spaces I created to explore the practice of contemporary earthen architecture. Thus, I consider the research question to have been partially answered, but the research can be expanded in order to identify more attitudes.

As I explained in the autoethnography chapter, in the first part of this thesis the main method was critical reading and writing for evoking questions and unlearning bias. Questions regarding my previous education were partially answered by critically reading about the epistemological dimension of colonialism. I began to understand why I was exposed to study for three years the history of Western architecture instead of Latin American architecture and some of the criteria used to decide on the content of the studies I underwent to become an architect in Argentina. Besides, my decision to come to Finland to study sustainability was in part guided by an oppressive belief I had internalized: the future is in the Nordic countries—and in particular the future of sustainable architecture. I was used to, albeit unconsciously, deny the existence of this belief, maybe because it was difficult to accept how nonsensical it was. The situation changed radically when I found an explanation for the colonial origins of this kind of belief in my reading on coloniality of power.

The deeper I went with my inquiry, the more I needed concrete experiences to balance the abstraction. The second part of the thesis has been guided by the motivation of becoming the kind of architect that works with natural materials I want to be. The analysis and reflections on the embodied and practical learning with others experienced in the site-classrooms was the method for unlearning and relearning the meaning of architecture in light of theory.

Reading on decolonial theories in parallel with training on earthen architecture drove me in the direction of assuming that probably being the type of architect I was interested in being was not similar to anything I had previously learnt. I needed to first unlearn the Western value system in order to relearn the meaning of architecture and assume a decolonial attitude.

One of the initial critiques I received over my project was that it might result in being too personal to have any academic relevance. In order to understand the place that my own experience could have in broader knowledge production processes, I decided to take a look into autoethnography. This method helped me to make sense of the notes and diaries I wrote to elucidate the internal processes I went through in order to re-invent myself in the new scenario inhabiting between Argentina and Finland, west and south, or top and bottom.

It was through investigating my own personal experiences motivated by the search of becoming the kind of architect I wanted to be that I began to contemplate the need to assume a decolonial attitude towards earthen architecture and I decided to investigate what that would mean. Identifying coloniality of power as a wider social and cultural phenomenon, and earthen architecture as the architectural practice more aligned with sustainability, I investigated them through my personal experience and I used this as the base off my research. It is in this sense that I consider autoethnography as a guiding methodology in helping me convey my research findings in a way that they are applicable and relevant for others as well.

On a very practical level, working with such methods was an opportunity to practice and improve technical skills whilst conducting research. This research project was a suitable launching point from which to study and build confidence in the field of earthen architecture. Besides, working on this thesis project provided a glimpse into the process of academic research and writing, as a result further academic study is another avenue I would also like to follow.

Finally, my research findings have potential to be relevant to other people who perceive the injustice of the stigma of poverty and the identity issues in relation with indigenous populations in Latin America especially in the field of earthen architecture; as well as for those who consider that architectural and urban theories need a profound revision; and especially for those who aim to embrace alternative ecological human settlements in the frame of *autonomía*.

March 27, 2018

Through the analysis of the impact that big themes had in my personal learning experience, with this thesis I try to develop further my own understanding of those conditions basic for human experience to balance healthy life: education, art, architecture, and the environment.

The journey of studying Creative Sustainability started with my search for better purposes for architecture and urban planning. By that time, I wondered if it was possible to achieve wellbeing while considering environmental and ethical concerns at the same time. However, there were some issues I didn't consider in the beginning, like the impact that moving abroad and studying in a completely different learning environment had on my understanding.

Identity issues started to appear in my daily journals. Writing my stories has been the method I used for understanding the world. Hence, arts-based autoethnography and narrative inquiry was the best approach I found to communicate my learning experience.

The journey was a long one and it had many stops to reflect on cultural and social issues, as well as to give proper space for self-doubt and critical thinking. Then there was an extra loop, which was the longest one and consisted of becoming a mother.

Now I am back on track and willing to review my experiences with a renewed perspective and close the master journal in order to enter a new cycle.

list of
REFERENCES



13. Earthen house in Córdoba, Argentina. Kalapas.

Archidatum. *Architecture in Africa*. (2016, March 28). Retrieved June 15, 2018, from Hassan Fathy and The Architecture for the Poor: The Controversy of Success.: <http://www.archidatum.com/articles/hassan-fathy-and-the-architecture-for-the-poor-the-controversy-of-success/>

Bell, L. A. (2010). Theoretical foundations: What is social justice? In M. (. Adams, W. J. Blumenfeld, R. (. Castaneda, H. W. Hackman, M. L. Peters, & X. (. Zuniga, *Teaching for diversity and social justice (2dn edition)* (pp. 21-26). New York: Routledge.

Bernadette Esquivel, M. (2017). La arquitectura de tierra en Costa Rica. Vigencia y vulnerabilidad. 17° *SIACOT Seminario Iberoamericano de Arquitectura y Construcción con Tierra: Tierra Identidades* (págs. 371-380). La Paz: Proterra/Faadu-Umsa.

Bochner, A. P., & Ellis, C. (Eds.). (2002). *Ethnographically speaking. Autoethnography, Literature and Aesthetics*. Walnut Creek, United States: Altamira Press.

Botero, A. (2013). *Expanding design space(s). Design in communal endeavours*. Helsinki: Unigrafia.

Botero, A., Del Gaudio, C., & Gutiérrez Borrero, A. (2018). Editorial. Designing, sensing, thinking through autonomía(s). *Strategic Design Research Journal*, 52-57.

Castro-Gómez, S. (2005). *La poscolonialidad explicada a los niños*. Popayán: Universidad de Cauca.

Condori Huanca, F., & Salcedo Gutiérrez, Z. (2016). Patrimonio vernáculo en Bolivia [Bolivian vernacular heritage]. In M. Correira, C. Neves, L. Guerrero, & H. Pereira Gigogne (Eds.), *Arquitectura de tierra en América Latina [Earthen architecture in Latin America]* (pp. 69-72). Lisboa: Argumentum.

Contreras, C. (2006). Hacia una nueva epistemología de la teoría urbana y arquitectónica [Towards a new epistemology of urban and architectural theory]. *Estoa*, 91-97.

Correira, M. (2016). Introducción al patrimonio mundial en América Latina [Introduction to world heritage in Latin America]. En M. Correira, C. Neves, L. Guerrero, & H. Pereira Gigogne, *Arquitectura de tierra en América Latina [Earthen architecture in Latin America]* (págs. 24-26). Lisboa: Argumentum.

Correira, M., Neves, C., F., G. L., & Pereira Gigogne, H. (Eds.). (2016). *Arquitectura de Tierra en América Latina [Earthen Architecture in Latin America]*. Lisboa: Argumentum.

Ellis, C., & Bochner, A. (2000). Autoethnography, Personal Narrative, Reflexivity: Researcher as Subject. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research*. California: Sage.

Escobar, A. (2016). *Autonomía y diseño. La realización de lo comunal*. Popayán: Universidad del Cauca.

Farrés Delgado, Y. (2013). *Críticas decoloniales a la arquitectura, el urbanismo y la ordenación del territorio. [Decolonial critiques towards architecture, urbanism and territorial order]*. Granada: Universidad de Granada.

Farrés Delgado, Y., & Matarán Ruiz, A. (2012). Colonialidad territorial: para analizar a Foucault en el marco de la desterritorialización de la metrópoli. Notas desde La Habana. [Territorial coloniality: to analyse Foucault within the bounds of metropolis deterritorialization. Notes from La Habana]. *Tabula Rasa*(16), 139-159.

Farrés Delgado, Y., & Matarán Ruiz, A. (2014). Hacia una teoría urbana transmoderna y decolonial: una introducción [Towards a transmodern and decolonial urban theory: an introduction]. *Polis, Revista Latinoamericana*, 13(37), 339-361.

Ferreiro, A. (2010). *Arquitectura con tierra en Uruguay* [Earthen Architecture in Uruguay]. Montevideo: Alejandro Ferreiro.

Finley, S. (2005). Arts-based inquiry. Performing Revolutionary Pedagogy. In N. K. Denzin, & L. Y. S. (Eds.), *The Sage handbook of qualitative research* (3. ed.) (pp. 681-694). California: Sage.

García, G., Tamayo, J., & Malo, G. (2017). Valoración de la arquitectura vernácula de Azuay y Cañar, Ecuador. *Seminario Iberoamericano de Arquitectura y Construcción con Tierra*, 17. *Memorias...* (pp. 658-671). La Paz: PROTERRA/FAADU-UMSA.

Groat, D. W. (2013). *Architectural Research Methods*.

Guerrero Baca, L. F. (2010). La herencia de la arquitectura tradicional [Traditional architecture heritage]. *Alarife: Revista de arquitectura*, 20, 8-26.

Guerrero, L. (2016). Introducción al patrimonio precolombino en América Latina [Introduction to pre-Columbian heritage in Latin America]. In M. Correira, C. Neves, L. Guerrero, & H. Pereira Gigogne (Eds.), *Arquitectura de tierra en América LATina* [Earthen architecture in Latin America] (pp. 104-106). Lisboa: Argumentum.

Guerrero, L. (2016). Introducción al Patrimonio Vernáculo en América Latina [Introduction to vernacular heritage in Latin America]. In M. Correira, C. Neves, L. F. Guerrero, & H. Pereira

Gigone (Eds.), *Arquitectura de tierra en América Latina [Earthen architecture in Latin America]* (pp. 62-64). Lisboa, Portugal: Argumentum.

Hernández Carazo, A. J. (2017). Por qué Costa Rica desconfía de la arquitectura de tierra? . *17° SIACOT Seminario Iberoamericano de Arquitectura y Construcción con Tierra: Tierra Identidades* (págs. 381-391). La Paz: Proterra/Faadu-Umsa.

Hyvönen, V. (Photographer). (2014) *Sightseeing platform in Vartiosaari* [digital image]. Retrieved from: <http://www.petriruikka.com/filter/Pixelache/Camp-Pixelache-2014>.

ICOMOS. (1999). Retrieved on September 17 of 2018, from Carta del patrimonio vernáculo construido: https://www.icomos.org/images/DOCUMENTS/Charters/vernacular_s p.pdf

Kalapas.bioarq (Photographer).(2018) Earthen house in Córdoba, Argentina [digital image]. Retrieved from: https://www.facebook.com/kalapas.bioarq/?tn-str=k*F

Kiesinger, C. (2002). My father's shoes: The therapeutic value of narrative reframing. In A. Bochner, & C. Ellis (Eds.), *Ethnographically Speaking* (pp. 95-114). Walnut Creek: Altamira Press.

Lopez, M. (2011). *Reinterpretación de la arquitectura vernácula habitacional: Hassan Fathy y Charles Correa [Reinterpretation of vernacular housing architecture: Hassan Fathy and Charles Correa]*. Villa Nova de Cerveira, Portugal: Escola Superior de Gallaecia.

Manzini, E. (2015). *Design, when everybody designs: An introduction to design for social innovation*. Cambridge: The MIT Press.

Marañón-Pimentel, B. (2012). *Solidaridad económica y potencialidades de transformación en América Latina. Una perspectiva descolonial*. Buenos Aires: CLACSO.

Martusewicz, R. A., Edmundson, J., & Lupinacci, J. (2015). *Ecojustice Education* (2. ed.). New York: Taylor & Francis.

Mignolo, W. (2010). *Decolonial Aesthesis*.

Minke, G. (2001). *Manual de construcción en tierra [Earth construction handbook]*. Montevideo: Nordan-Comunidad.

Neves, C., Salcedo, Z., & Faria, O. B. (Eds.). (2017). 17° SIACOT Seminario Iberoamericano de Arquitectura y Construcción con Tierra: Tierra Identidades. La Paz: Proterra/Faadu-Umsa.

Pautasso, M., & González, A. (2016). Arquitectura contemporánea en Argentina [Contemporary architecture in Argentina]. In M. Correira, C. Neves, L. F. Guerrero, & H. Pereira Gigogne, *Arquitectura de tierra en América Latina [Earthen architecture in Latin America]* (pp. 233-236). Lisboa: Argumentum.

Pereira Gigogne, H. (2016). Introducción a la arquitectura contemporánea [Introduction to contemporary architecture]. In M. Correira, C. Neves, G. L. F., & H. Pereira Gigogne (Eds.), *Arquitectura de tierra en América Latina [Earthen architecture in Latin America]* (pp. 230-232). Lisboa: Argumentum.

Pereira Gigogne, H. (2016). Introducción a la vivienda social [An introduction to social housing]. In M. Correira, C. Neves, G. L. F., & H. Pereira Gigogne (Eds.), *Arquitectura de tierra en América Latina [Earthen architecture in Latin America]* (pp. 205-229). Lisboa.

Quiroz Quinteros, I. (2017). La tierra, maestra del aprendizaje. 17° SIACOT Seminario Iberoamericano de Arquitectura y Construcción con Tierra: Tierra Identidades (pp. 520-528). La Paz: Proterra/Faadu-Umsa.

Ríos Cabrera, S. (2016). Arquitectura contemporánea en Paraguay [Contemporary architecture in Paraguay]. In M. Correira, C. Neves, G. L. F., & H. Pereira Gigogne (Eds.), *Arquitectura de tierra en América Latina [Earthen architecture in Latin America]* (pp. 259-262). Lisboa: Argumentum.

Rojas Parma, L. (2015). Protágoras y el significado de Aisthesis. *Revista de Filosofía*, 71, 127-149.

Rotondaro, R. (2007). Arquitectura de tierra contemporánea: tendencias y desafíos [Contemporary earthen architecture: tendencies and challenges]. *Apuntes*, 342-353.

Rotondaro, R., Aranda, Y., & Gonzáles, A. (2017). Avances y Alcances de las normativas de la construcción con tierra en Iberoamérica. Una aproximación. *17° SIACOT Seminario Iberoamericano de Arquitectura y Construcción con Tierra: Tierra Identidades* (pp. 507-519). La Paz: Proterra/Faadu-Umsa.

Roux Gutiérrez, R., & Espuna Mujica, J. (2016). Arquitectura contemporánea en México [Contemporary architecture in Mexico]. In M. Correia, C. Neves, G. L. F., & P. G. H., *Arquitectura de tierra en América Latina [Earthen architecture in Latin merica]* (pp. 256-258). Lisboa: Argumentum.

San Vicente, J. (2014). La ética de lo obvio. The future of non-pedigreed architecture. *Arquitectura Viva*, 161, 11-19.

Sipan, M. (2018, June 2). *Lavaca*. Retrieved October 15, 2018, from Aníbal Quijano: El teórico del Bien Vivir: <https://www.lavaca.org/notas/anibal-quijano-el-teorico-del-bien-vivir/>

socialtextjournal.org. (2013). *Social Text - Periscope special issue*. Retrieved from Decolonial AestheSis: colonial wounds, decolonial healings: https://socialtextjournal.org/periscope_topic/decolonial_aesthesis/

Suominen, A. (2003). *Writing with photographs, re-constructing self: An arts-based autoethnographic inquiry*. Ohio: The Ohio State University.

Testori, J., & d'Auria, V. (2018, August). Autonomia and Cultural Co-Design. Exploring the Andean minga practice as a basis for enabling design processes. *Strategic Design Journal*, 11(2), 92-102.

Retrieved 08 18, 2018, from
<http://revistas.unisinis.br/index.php/sdrj/index>

Tomasi, J., Sosa, M., & Rolón, G. (2016). Patrimonio vernáculo en Argentina [Argentinian vernacular heritage]. In M. Correira, C. Neves, L. Guerrero, & H. Pereira Gigogne (Eds.), *Arquitectura de tierra en América LATina [Earthen architecture in Latin America]* (pp. 65-68). Lisboa: Argumentum.

Transnational Decolonial Institute. (2018, July). *Transnational Decolonial Institute*. Retrieved from Decolonial Aesthetics (I):
<https://transnationaldecolonialinstitute.wordpress.com/decolonial-aesthetics/>

UNESCO-World Heritage Convention. (2007). Retrieved September 16, 2018, from World Heritage Earthen Architecture Programme (WHEAP): <https://whc.unesco.org/en/earthen-architecture/>

UNESCO-World Heritage Convention. (2010). Retrieved July 20, 2018, from Safeguarding project of Hassan Fathy's New Gourni Village: <https://whc.unesco.org/en/activities/637/>

Villaverde Maza, N. (2017). *Una antropóloga en la luna [One anthropologist on the moon]*. Madrid: Ediciones Oberon .

Viñuales, G. M. (2016). Patrimonio vernáculo en Panamá [Vernacular heritage in Panama]. En M. Correira, C. Neves, L. F. Guerrero, & H. Pereira Gigone, *Arquitectura de tierra en America Latina [Earthen Architecture in Latin America]* (págs. 95-97). Lisboa, Portugal: Argumentum.

Westerndorff, D. (2009). *Self-built housing in developing countries: current contributions and challenges to local development through volunteerism*. Financiadora de Estudos e Projetos.

Zorrilla, H. (2015). *El concepto arquitectura vernácula*. Retrieved 08 24, 2018, from Arquitectura de casas [Housing Architecture]:
<http://www.arquitecturadecasas.info/el-concepto-arquitectura-vernacula/>

fin.

